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ORIGINAL ARTICLES.

ON MALIGNANT TRANSFORMATION OF CYSTIC BREASTS— RECORD OF A CASE.*

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In presenting this subject I have in mind rather the discussion it will bring, than any new matter I have produced. The early experience which befell me of seeing a breast removed which contained a single cyst the size of an egg in whose smooth wall was implanted an adenocarcinoma of the size of a pea, has tended to make me question the innocence of each cystic breast I have seen since, and a few recent suspicious cases have again aroused the question of diagnosis and treatment for cystic conditions of the mammae and the possibility of a malignant change in cases that have gone on benignly for some time. No one but those who have to deliver authoritative opinions upon tumors of the breast, afterwards to be verified or falsified by minute examination, can appreciate the difficulty of deciding whether a given case of mammary cyst has arisen *de novo*, or whether it has not originated in a morbid growth which surrounds its walls or sprouts into its cavity.

The frequency of the discussion of malignant transformation of simple cysts in the writings of the older surgeons is indicative of a firm belief which they could not prove, but which clinically many believed to occur, but I shall only present the views of more recent observers, who have the support of microscopic examination. I am aware that the fundamental question of the etiology of cancer is the main issue in this uncertain transformation. I will not attempt to enter this field but will confine myself to observations of specific instances pointing to this change. This belief of the malignant transformation is based in part on the finding of evidences of chronic cystic mastitis in breasts removed for cancer, and clinically, on the appearance of carcinoma in breasts that have been for a long time the seat of chronic cystic degeneration.

In connection with every disease of the breast, cysts may be found. Classifications are theoretically quite easy, but the fact of the variety of conditions in which cysts are associated, almost tempts one to consider them accompaniments rather than distinct involvements. The somewhat

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simplified divisions into post-pregnant galactocele, retention cysts and chronic cystic mastitis comprise all distinctly intrinsic mammary cysts, and of these I would draw your attention particularly to retention cysts and chronic cystic mastitis, and some of their subvarieties.

In considering the etiologic factors of cystic disease, one is impressed by the inconclusive position we are still in, which can be accounted for by the failure of any classification to meet both clinical and histological demands. The time of life when the breast may be the seat of cystic change may vary from puberty to menopause, with the greatest preference toward the latter. Chronic cystic mastitis has been considered to bear a close relation to the climacteric, but it is often found in young women, when there is no appreciable difference in the histological structure, or clinically from those of older women. If there is a pathological entity, a simple retention cyst (which one is inclined to be skeptical about), these are described as occurring by preference during the atrophy of the climacteric.

The relation to menstruation or its disorders is frequently mentioned and is noticed particularly by Konig, who calls attention to the pain and occasional increase of the tumefaction at menstruation, particularly if menstruation is painful, explained by the congestion in the breast, that normally occurs at this period. The breasts may be the seat of uneasy sensations, pains and aches, worse at the menstrual period and harassing the patient with the fears and terrors of cancer, while there are cases which show no uneasiness even when manipulated. Remembering that neuralgia of the organ is so frequently encountered, let us consider pain as a very uncertain symptom, only reliable in cases without other nervous manifestations.

If one bears in mind that carcinoma is most likely situated in the upper and outer quadrant, the general statement might also be made that cysts come any place in the gland, large single cysts showing a slight preference for the locality near the nipple, but multiple cystic mastitis is distributed generally with a slight preference for the periphery. In the single cyst, due to blocking of the lactic duct, the contents may be discharged through the nipple, while rarely in the acinous type there may be an emptying of the contents at the nipple. The discharge if from a simple cyst is straw-colored, but if there is a papillary ingrowth present it may contain blood, or blood pigment in varying degree. Still cells and cell detritus are not necessarily diagnostic of malignancy, but are suspicious. Nor can we rest assured that no malignancy is present if the fluid is clear and straw-colored. The nipple is retracted rarely in simple cysts, but according to Sutton it may be inverted, and the skin is sometimes adherent to the tumor mass, particularly if there has been any previous infection. Both breasts are frequently involved.

In this much, as I have stated, little is conclusive to allow our diagnosis;

the chief reliance, after all, is in palpation, and in this we often are left undecided. In Greenough and Hartwells' series of thirty cases examined of chronic cystic mastitis, the indication was present in every case, and in ten cases was regarded as a tumor, and this proportion holds generally, according to most authorities. Palpation, to give reliable impressions, must be done with the flat hand pressing the gland against the chest wall instead of pinching the breast between the fingers, but if the cyst is large and tense, with a thick wall and buried deep in the mammary substance, a fair determination is impossible.

With the knowledge that 80 per cent. of all cases are cancerous the surgeon generally fears to delay in suspicious cases, while on the other hand, in those clearly innocent cysts he hesitates to sacrifice a whole gland unless other symptoms demand, irrelative to their pathological nature.

The points that I want to make this evening are:

1. Certain diagnosis is impossible in the great majority of cystic diseases of the breast.
2. There is a liability of malignant change always present in a benignly diseased breast.
3. Operative relief should be radical in most cases.

As to the uncertainty of diagnosis I have said enough and will turn to the liability of malignancy arising in benign cysts as a next consideration.

Cystic disease of the breast is in many points similar to cystic degeneration of the ovary, since both come on about the same time in life, are in the beginning benign, but are equally apt to be the seat of papillary ingrowths, and as Ziegler says, "the analogy extends to their clinical, as well as histological characters, for when the epitheal proliferation and the production of papillæ become exuberant the mammary growths are apt to acquire a certain degree of malignancy and pass without any abrupt transition into undoubted carcinoma. Accordingly it is not impossible for a proliferating mammary cystoma to give rise to secondary growths possessing the structure of carcinoma."

Shield is not so definite in his insistence on carcinomatous change in cystic disease of the breast, but described a class of cases in which cancer appears to infiltrate the walls of a pre-existing cyst and yet, while being rare, relates the three cases of Symonds which are clearly carcinomatous degeneration of papillæ in pre-existing cysts.

Dennis is clearly of the notion that the cysts may degenerate into malignant neoplasms and recommends Thomas' operation of cutting a flap of skin (with areola and nipple) with base upward, and excision of the gland in all cases over thirty-five years of age.

De Costa says cystic breasts are dangerous because they are likely to eventuate in duct cancer.

On the other hand, Bull is of the opinion that there is little evidence

to show the malignant degeneration in cysts, and Abbe more recently has reiterated this belief and recommends aspiration of cysts, which he has done in forty-one cases in the past eight years, and following practically all of them to the present time finds only two of them refilled and in these a secondary aspiration cured. He thinks cysts of the breast much more common than generally thought and that the differential diagnosis can be easy and absolute and the cure can be said to be as easy and absolute. J. Hutchinson, Jr., says, "Involution cysts met at the periphery start in the terminal acini or ducts and are due to the constriction by increased fibrous tissue. The change the living epithelium undergoes readily suggests a termination in cancer, but I believe with Bull and others that there is no proof of such transformation." He, however, presents a specimen showing the supervention of schirrhus in and around a small adenoma which had existed for thirty years and alludes to a similar case of Dr. Collinworth of schirrhus developing in an adenoma.

Snow reported a case of malignant invasion of a cyst formation that accompanied connective tissue hyperplasia. Ellis reports a case of cystic degeneration showing transformation into Schirrhus carcinoma and emphasizes his belief in the strong probability of malignant transformation occurring in cystic degeneration of the breast.

Greenough and Hartwell, in a most excellent article,* have recently described thirty chronic cystic breasts and believe that the increased fibrous tissue is the normal stage of decline of the gland at menopause, and are convinced that the French view implying an inflammatory process, due to a bacterial infection of the ducts, is erroneous. Quoting from their paper: "Papillary outgrowths of epithelium of columnar form was present in thirteen cases, some due to a confluence of adjacent cysts, leaving a connective tissue stalk, while other similar structures were apparently produced by simple proliferation and heaping up of epithelial cells. A high degree of epithelial proliferation in cysts was found when papillary outgrowths from the walls met and united in the center or anastomosed laterally forming masses of epithelium without connective tissue support. In these cell masses the tendency to formation of a gland lumen and arrangement of the epithelial cells radically around this space could be demonstrated beyond all doubt. This form of growth the writers, for lack of a better term, have designated as adenomatous proliferation." This phenomenon has been described by Paul as the growth of carcinoma infiltrating a pre-existing cyst. That it approaches carcinoma cannot be denied, but in twenty-seven cases it was present seven times and in not one of these cases could carcinoma be demonstrated elsewhere.

That these progressive changes of the epithelium occasionally go

* Journal of Medical Research, June, 1903. A complete bibliography is given.

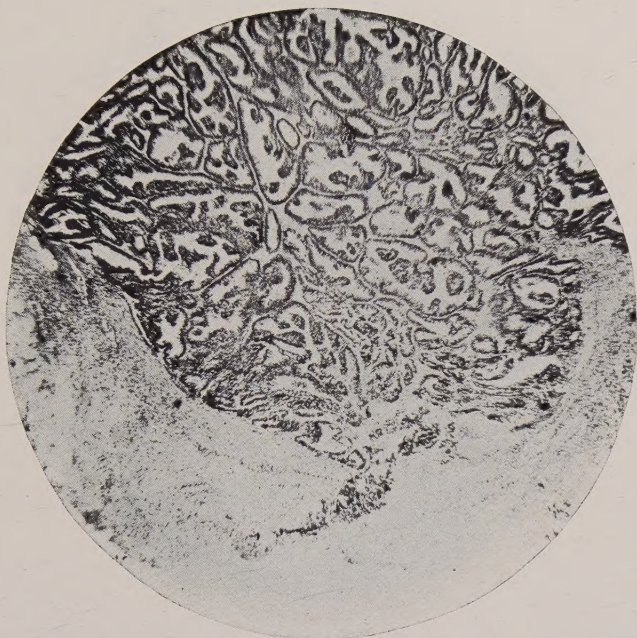


FIG. A.—Magnified 100 times. Operation October, 1900. A benign cystic papilloma, breaking through its capsule at a point where the cells have arranged themselves atypically.

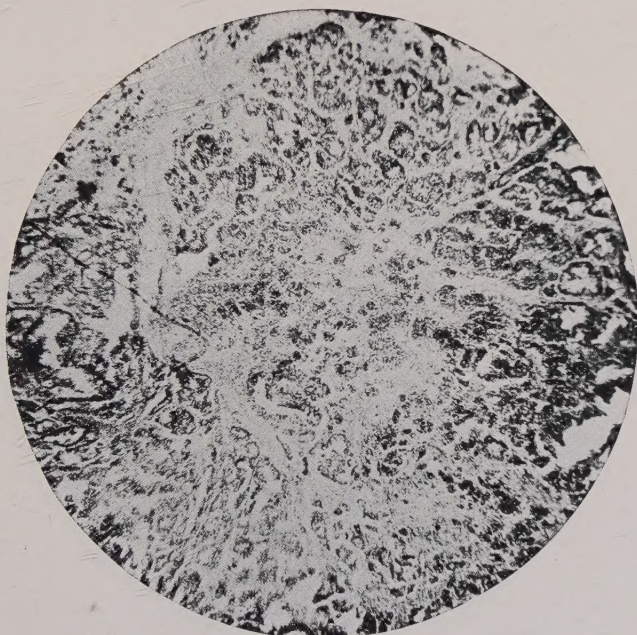


FIG. B.—Magnified 100 times. Operation December, 1901. Complete amputation. Irregular arrangement of epithelium with areas where cells are enclosed in overgrowth of fibrous tissue.

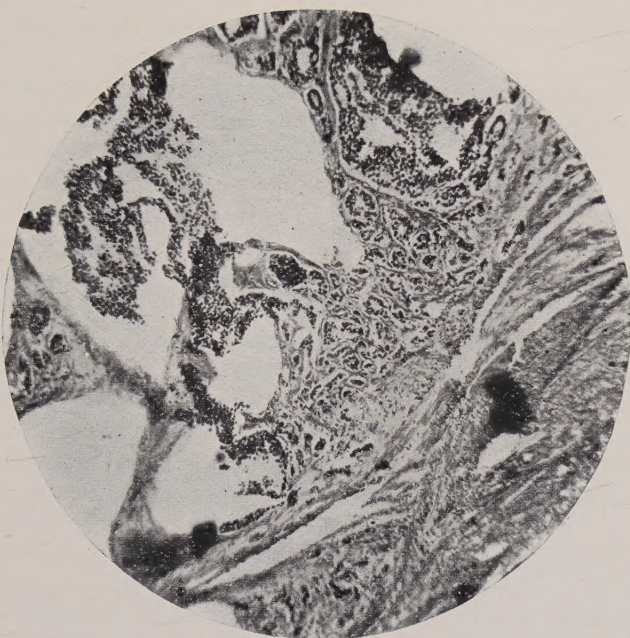


FIG. C.—Magnified 100 times. Removed March, 1904. Metastasis removed with remnant of pectoral muscle. Type approaches scirrhus in places. In one large cyst is seen the adenomatous arrangement of epithelium with an attempt at formation of lumen. Also a suggestion of original papillomatous cyst.

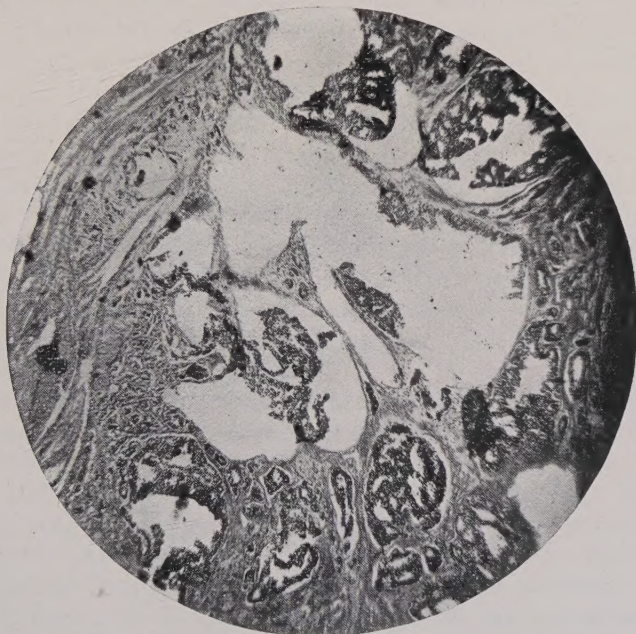


FIG. D.—Magnified 250 times. Same as Fig. C.

beyond the border line, and present characteristics of actual new growth and that of a malignant nature, can be demonstrated. Carcinoma was present in three of their cases in addition to the lesions of chronic cystic mastitis, and was based on the following histological characteristics not found in the twenty-seven other cases: 1, Extreme degrees of proliferation of epithelium; 2, irregularity in size and shape of nuclei and of epithelial cells; 3, mitosis frequently observed, occasionally atypical in form, and evidence of infiltration of epithelial cells in masses of irregular shape and without limiting membrane. The areas of undoubted carcinoma were all of the same general type. Epithelial cells were heaped together without connecting tissue support while here and there cells arranged themselves radially about a lumen, such a picture as is usually designated adeno-carcinoma. The gross examination of these three malignant cases had failed to show carcinoma, but presented the typical increase of fibrous tissue and multiple cyst formation.

The case which I want to present to-night is a very interesting one, in that observations have been made at various periods of growth and changes in structure have been noted which show a transition from innocence to malignancy, and, in one or two places, this change can be in part shown in the same preparation.

Miss E. D. C. was seen by Dr. Henry H. Mudd in March, 1892, suffering from apparently a diffuse chronic cystic mastitis in which the upper and outer quadrant of the gland was most involved. There had been discharge from the nipple, watery but occasionally bloody.

A little later in the year he noted an increase of the process, two-thirds of the gland being involved. In June, 1893, he excised a portion of the gland. In July, 1895, and October, 1896, he again removed small nodules, and in May, 1897, another small tumor beneath scar.

The nature of the original tumor mass is clearly described by Dr. Beggs, at that time pathologist to the Washington University Medical Department: "This consists of large, irregular alveolar cavities lined with one or more layers of columnar polyhedral epithelium. Projecting into the alveoli are branched bands of connective tissue covered with the same kind of epithelium. The stroma consists of cellular connective tissue. In one place the epithelial cells are intermingled with the stroma without definite arrangement."

After several small nodules had been excised from time to time, a complete amputation of the breast, with removal of the axillary contents and part of both pectorals, was done by Dr. Harvey G. Mudd in December, 1901, and since then there has been no further trouble. The breast tissue remaining at the time of the last operation was scanty, but contained nodules which were carcinomatous of a type to be described, and in the axilla was found a gland which contained a metastatic growth.

The examination of the tissues removed at the last operation showed a number of small nodules about the size of a pea and one or two 2 cm.

in diameter, scattered through the remnants of the breast tissue, which were distinctly encapsulated, and on section were granular and white in appearance and rather friable under pressure. The description given above of the microscopic appearance of the tissue first removed will apply to some of these subsequent examinations. The picture is strikingly like a papillomatous cyst of the ovary, the thin stalks of the papillae being covered with a single layer, occasionally increased to a double layer of columnar cells, while in every section a complete capsule can be demonstrated. The section which I would call your particular attention to, shows a change in this regular appearance, which is to be regarded as a malignant transformation. In cut "A" the picture is one of a benign cystic papilloma, but at its periphery is seen an atypical arrangement of cells near the capsule, and at one point these cells are seen to break through the capsule. This growth was obtained a year previous to the complete amputation, but the atypical appearances at the time of the removal of the whole breast are more numerous, and while not showing the striking transition from a simple to the malignant form, have the conclusive evidence of malignancy in the fact that there is a metastasis in the axilla. The opportunity afforded by this case of a series of observations of growths from the same gland, which showed transformation in progressive stages from a clinically benign to a clinically malignant growth, and also microscopically was possible to demonstrate at least one of these malignant changes, adds another observation which may serve in a small way to nullify the dangerous dictum put forward by Bull, Hutchinson, Bryant and others that malignant transformations of mammary cysts are unknown.

The treatment of cysts of the breasts must vary with the conditions of the organ. In certain rare cases where only one cyst is found, and that near the surface and easily diagnosed, simple aspiration will suffice, or better incision which will allow the inspection of the lining membrane. If there is a question of diagnosis on account of the deep and inaccessible situation of the lump an incision into the growth might sometimes be justified, always bearing in mind that if cancer is found this preliminary disturbance is likely to distribute the cancer cells throughout the neighboring lymphatics or into the blood stream. In deep-seated suspicious cases of single nodule, and in all cases of multiple cystic breasts, it is best to remove the entire gland through a curved incision beneath the breast, leaving the nipple in place. This procedure, as recommended by Thomas, leaves very little scar and is not deforming, and can be made the preliminary step of the complete Halsted operation should the gland removed show evidence of carcinoma when examined immediately.

NOTE—Since reading this paper the patient has been operated upon for a nodule which appeared above the sight of the previous operations, which, when dissected, was found to lie over the remnants of the pectoral mus-

cle left at the time of the amputation of the breast. The mass was about the size of a hazel nut, and was firmly attached to the surrounding tissue, the skin being, therefore, removed over an area the size of a dollar, together with that part of the pectoral muscle which remained. This mass showed a carcinoma with the cells arranged in places as is found in an adeno-carcinoma, and in places the connective tissue had increased to an extent that the picture was typical of scirrhus. The cystic nature of the parent growth is still seen. A photomicrograph of this mass shows its type.

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SUPPURATIVE OSTEO-MYELITIS.

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The subject of osteo-myelitis, of course a very old one, and one that has in years gone by been thoroughly discussed, does now, on account of the disease being so frequently found in our hospitals and in the practice of general surgeons, elicit our most intense interest and should call forth our best efforts to attack and conquer it.

It is only of recent years that the pathological anatomy has been correctly interpreted, and has thereby clearly demonstrated that the older surgeons often opened abscesses that occurred in the early stages of the disease, believing them to be simply on account of the location of the pus, the results of a suppurative periostitis, and I am not wrong when I assert that similar mistakes are frequently made now.

Osteo-myelitis, distinctly an inflammation of the bone marrow, seems not to have gotten its name until Nelaton so described it as a special disease in 1834, when Pirogoff, Allen, Mr. Stanley and others substantiated his views. So clouded was the exact nature of the disease that it was often mistaken for acute rheumatism, typhoid fever, then called bone-typhoid. Rosenbach, in 1881, by cultivating the staphylococcus of osteo-myelitic pus and injecting a pure culture of same into the circulation of animals that had been subjected a few days prior to some bone injury, produced a suppurative inflammation at the seat of the trauma. He also assumed that after a first attack of osteo-myelitis some of the microbes remain in the tissues in a latent condition until at some subsequent time local conditions are created which enable them to again show their specific pathological properties. The pus of osteo-myelitis may contain the staphylococcus aureus, or albus, and not infrequently the pneumococcus has been found. Undoubtedly the staphylococcus aureus, and especially in children, is the most frequent cause of the disease. When a streptococcus invasion has occurred we get a more irregular fever, a redder skin, painful adenitis and lymphangitis, and if there is metastasis it is usually articular, synovial or serous.

As to the etiology of osteo-myelitis much has been written, and, of course, now all agree that the cause is the microbic infection, but as to the mode of entrance or avenue of infection authorities are still at variance. Kraske, for example, has claimed that many cases closely resemble pyemia in their origin, and cites that an osteo-myelitis may originate from a skin abscess which has already healed. The tonsil, the intestinal and respiratory tracts have all been thought to be the routes along which the bacteria gain their entrance. Typhoid and other low forms of fevers, and tuberculosis seem to invite subsequent osteo-myelitic processes. We know that the capillary vessels of medullary structure have a caliber that is four times greater than the caliber of the arterial vessels that supply them, which undoubtedly favors the location of microbes in such a territory, and that the long bones, especially near their epiphyseal cartilages, are the usual seat of osteo-myelitic processes has been clearly proven. Why the region near the epiphyseal cartilage should be selected by the pus to do its damage can be well explained when we consider that in growing bone there is continually a newly-formed spongy tissue, very vascular and without fat, and the periosteum intimately connected with the cartilage. What more can nature do to make the attack of these microbes an easy one. Bearing in mind, therefore, the delicate and very vascular tissue in these regions it is easy to understand how a slight injury, which is enough to bruise these vessels, causing some effusion of blood, interferes with the nutrition of the part, opens a nidus for the infection and results in the terrible bone destruction which this disease is capable of. Often an injury, which, apparently slight, causes minute fractures of the bony trabeculae and in this way again favors an osteo-myelitic process.

In the case I wish to present to-night, I believe this latter pathological condition was the beginning of the trouble: A little girl of ten years of age, not strong, having gone through a spell of typhoid recently, fell out of a swing and turned her ankle, as she explained it, but after an hour of quiet she was again able to resume her play, complaining only now and then of slight pain. On the following day the ankle became badly swollen and a physician was called in who diagnosed a sprained ankle and ordered hot applications. The history of the case up to the time when I saw it was that the swelling had persisted, and in two places above the ankle showed inflammatory signs, whereupon small incisions had been made, pus being evacuated. When I was called to see the case the old incisions had healed, but the entire leg showed inflammatory trouble of deep-seated nature, and while all signs pointed to suppurative osteo-myelitis, I nevertheless insisted upon having an x-ray photograph taken so as to see, if possible, the extent of bone involved. The pictures show that the diseased condition started at the epiphyses and continued up the tibia for the greater part of its shaft, and with this knowledge to guide me I made a long incision over the tibia from the

ankle almost to the knee, got down to the bone, found the usual phlegmonous inflammation of the soft parts and the periosteum almost entirely destroyed. The bone for a number of inches was necrotic and could be lifted out, and where the medullary canal was involved, thorough opening, curretting and disinfection was resorted to, particular pains being taken not only to remove the sequestra formed, but to clean out completely the medullary cavities so as to invite a quicker asepsis and repair. By the method prescribed, followed by rest in bed, proper bandaging, splints, etc., with a nourishing diet, I was able to cut short the osteo-myelitic process, kept it from extending to the ankle joint, although it had reached, as the picture shows, almost to it, and have now the satisfaction of seeing my patient, one year after the operation, in good health, with a practically perfect leg and ankle. The lessons to be learned from this case I think are:

1st. That slight injuries may produce this disease, especially when there has been a fracture of some of the bony trabeculæ.

2nd. That an x-ray photograph, taken as early as possible, is a great help in making a diagnosis and guides one in the selection of the treatment.

3d. To make the incisions very long and to be sure to thoroughly cleanse the medullary canal.

TREATMENT OF CERTAIN EXTERNAL DISEASES OF THE EYE BY X-RAYS*.

BY JOHN GREEN, JR., M. D., of St. Louis, Missouri.

In the following paper I propose to give a brief resume of radiotherapy as applied to certain external diseases of the eye and its appendages, in the hope that your interest may be awakened in a branch of ophthalmic therapeutics which is still in its infancy, but which, if results already attained be any criterion, is destined to prove a valuable adjuvant to time-honored methods of treatment. The number of cases of ocular disease submitted to the rays is still too small to admit of any positive dicta relative to the precise limitations of the treatment and the diseases to which it is applicable. Nevertheless, results in certain classes of cases have been so uniformly excellent as to leave little room for doubt in the mind of an unprejudiced observer that a therapeutic method of superior merit has been added to the ophthalmic armamentarium.

The brilliant results obtained by dermatologists in the radiotherapy of cutaneous carcinoma led to the utilization of the rays in the treatment of this disease as it manifests itself in the eyelid. As you are doubtless aware, these skin cancers of the eyelid have heretofore proved

* Read before the Missouri State Medical Association, 1904.

very difficult to deal with. Treatment consisted either in the application of caustics—a method which usually proved of little value—or in the removal of the growth by operation. These methods, even when successful, had the disadvantage of creating thick, contracted cicatrices which grossly deformed the lid margin. Plastic operation, while lessening the deformity, failed to yield a result cosmetically perfect. Furthermore, recurrence of the disease was to be expected in a certain proportion of cases. One of the first to approach the question from the standpoint of the ophthalmic surgeon was Sweet,¹ who reported three cases of epithelioma of the eyelid treated by radiotherapy. Of these, two were entirely cured; in the third the early improvement was not maintained. The failure in the latter case was ascribed to the fact that the rays were prevented from exerting their maximum effect on the orbital portion of the tumor, the patient refusing to permit the removal of the overlying atrophic globe. In a more recent paper Sweet² states that he has treated twenty cases of palpebral epitheliomata and has effected a cure in eighteen. One of the failures is referred to above. In the other—a case of rodent ulcer of the side of the head—the rays acted well for a time, but later the disease spread to the external canthus. In all the successful cases the diseased area was covered in by pliable, normal-appearing skin. One of the effects of the treatment was the notable relief of pain which Sweet ascribes to trophic change, possibly secondary to changes of degeneration in the finer nerve filaments. The cure was effected with a minimum of distortion of the lid margin. Recurrences were infrequent and were readily controlled by a secondary application of the rays. Similar results have been obtained by Pusey³, Mayou⁴ and others. The attitude of all workers in this field is well expressed by Sweet, who states that it is “no longer right to resort to plastic operations in cases of epithelioma and rodent ulcer of the eyelids.”

The technique of the application does not differ from that used by dermatologists: Thin sheets of lead, with an opening cut to correspond to the diseased area, is used to protect the uninvolved portion of the face. The patient is placed from six to ten inches from a low vacuum tube. The sittings, which should be of five to ten minutes' duration, will vary in frequency with the severity of the case. “Burns” are to be avoided by refraining from too long and too frequent exposures and by keeping the patient at a sufficient distance from the tube. With a view to preventing recurrence, it is recommended that sittings be continued from time to time after healing has taken place.

The application of x-rays to a disease exclusively ocular was first carried out by Mayou,⁵ who reported the cure by this method of a case of trachoma. He was led to experiment with radiotherapy in this disease on the following considerations: The efficacy of the treatment by caustics is due partly to the production of a leukocytosis with subsequent

cicatrizization of the trachomatous nodules, partly to the mechanical removal of the diseased tissues, and the destruction of the specific causative agent. Caustics possess the disadvantage of partially destroying the normal palpebral epithelium, thus increasing the tendency to scar formation. The x-ray is an agent capable of producing a more or less prolonged leukocytosis from the mildest to the intensest grade without (except under ill-regulated exposures) seriously impairing the integrity of normal epithelium. Theoretically, therefore, it should exercise a most favorable effect on trachomatous tissue.

Judging from the surprisingly rapid and complete cure in this and subsequent cases, it must be admitted that Mayou's theoretical contentions have been borne out by the results of treatment. The technique of the application is described as follows: The upper lid being everted, the lower is pushed up so as to cover the cornea (in pannus the cornea is left exposed). The patient is seated nine inches from the anode of a moderately-soft tube and is given daily sittings for four to six days, followed by a week's rest. Should there be no reaction the sittings are continued twice a week until the appearance of photophobia which indicates beginning reaction. Shortly after, the trachoma bodies begin to disappear. Sittings are continued once or twice a week until the masses are no longer visible. A certain amount of injection of the conjunctiva persists for several weeks after cessation of treatment and it is not possible to tell whether all masses have disappeared until this has subsided. Pannus disappears rapidly and old opacities and corneal scars clear up surprisingly.

The cases best suited for treatment are those of the ordinary chronic type. Acute cases exhibiting diffuse infiltrations with much photophobia require very careful management and are not so favorably influenced. In the end the conjunctiva is left free from scars and uncontracted. The following positive advantages are claimed: (1) The cure is effected with a minimum deformity of the lid; (2) the treatment is painless; (3) pannus clears with unexampled rapidity.

Mayou's results have been confirmed by a number of observers, notably by Stephenson and Walsh.⁶ In four cases of severe bilateral trachoma these authors subjected one eye only to the x-ray, the fellow (or "control" eye) being either untreated or treated by ordinary methods. Two cases were absolutely cured, the other two showed marked improvement, while in all the "control" eyes remained *in statu quo*. In the same paper the authors report the complete cure of a severe case of trachoma by the application of a mild high frequency brush by means of a vulcanite electrode. This interesting result led them to advance the suggestion "that the common agency may be a brush discharge visible from a high frequency electrode, but invisible from the focus tube." The two methods have been combined by Geyser,⁷ who reports eighteen cases successfully treated. After six to eight exposures to the x-ray,

the treatment is continued by the direct application to the conjunctiva of a high frequency vacuum electrode, for from one to three weeks.

A case of tuberculosis of the conjunctiva, in which the clinical diagnosis was substantiated by microscopic examination, the finding of the tubercle bacillus and successful animal inoculation, was subjected to x-rays by Stephenson.⁸ The case was practically well at the end of six weeks, no trace of disease remaining two months later. It is noteworthy that the cure was effected without the slightest deformation of the lid margin.

Any practitioner who has attempted to treat a case of vernal conjunctivitis has probably reached the end of his therapeutic resources long before he has made a permanent impression on this intractable disease. The success which attended the application of x-rays in a case of Allport's⁹ would seem to offer grounds for the hope that this method, if not productive of a permanent cure, would at least hold the disease in check during the annual hot weather exacerbations. Disappearance of the granulations from the lids and corneal margins, with the complete relief of subjective discomfort—lachrymation, burning and itching—were secured in a case of seven years' standing.

Harper¹⁰ reports the entire disappearance under x-ray treatment of three dark spots of pigment which persisted after the operative removal of a melano-sarcoma of the sclera. Pusey³ applied the rays in a case of deep carcinoma of the orbit and in glioma recurring after operation for glioma of the retina. In both there was evident retardation of the malignant process.

A consideration of recent radiotherapy of the eye would be incomplete without reference to a case of sarcoma of the orbit recently reported by Fox.¹¹ The tumor was attached to the bone in the naso-orbital region and had caused a marked exophthalmus. The case was deemed inoperable and x-ray treatment instituted. Fifty-five exposures with a high-vacuum tube resulted in the complete disappearance of the visible and palpable tumor and the restoration of facial symmetry.

It is a remarkable and interesting fact that the only deleterious effect of x-radiance upon the eye has been the production of a mild conjunctivitis. Taking into consideration the susceptibility to x-rays of the most highly differentiated epithelial elements, Pusey¹² suggested the possibility of atrophy of the rods and cones of the retina from x-ray exposure. His fear has proved groundless.

All observers agree that the cellular elements of a tissue are primarily influenced by x-rays. The epithelial cells are affected in the highest degree, next the blood vessels, and, in lesser degree, the other tissues. The first effect is one of stimulation, which is followed by disintegration of the cell structure. Certain proliferative changes then take place in the inner coats of the blood vessels. Later an inflammatory reaction appears, with pronounced leukocytosis. Finally the leukocytes complete

the destruction of the degenerated cells. The reaction of pathologic tissue is similar, except that the cells of these tissues being, as Pusey puts it, "relatively unstable," are more susceptible to the profound nutritional disturbance produced by x-radiance and hence are disintegrated by a degree of radiance insufficient to impair the vitality of normal tissue. I have been unable to find any account of histological examination of trachomatous tissue during the period of x-ray treatment. It is probably fair to assume that the tissue changes are not widely different from those which take place in the skin.

In the light of our present knowledge of the radiotherapy of ocular disease, the following conclusions would seem to be justified:

1. In epithelioma and rodent ulcer of the eyelid, radiotherapy surpasses all other methods of treatment.
 2. In selected cases of trachoma, radiotherapy offers the possibility of rapid cure. The treatment is practically painless and the cure is effected with a minimum of deformity to the lid.
 3. The method is worthy of trial in cases of vernal conjunctivitis, tuberculosis of the conjunctiva, orbital sarcoma and carcinoma and in recurrence of glioma after operation for glioma of the retina.
 4. The treatment is without danger to the function of sight.
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10. American X-ray Jour., 1902, iv, p. 1164.
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CLINICAL REPORT.

CLINICAL NOTES ON A CASE OF HYPERTROPHIC CIRRHOSIS OF THE LIVER IN A FEMALE.

BY JESSE S. MYER, M. D., of St. Louis, Mo.

Hanot's disease (*cirrhose hypertrophique avec ictère*) is not altogether common in this country, and is at best infrequent in females. Schachman observed twenty-six cases, twenty-two of which were males. The occurrence, therefore, of hypertrophic cirrhosis in females is always of sufficient interest to justify its being placed on record.

A young lady twenty-six years of age consulted me because of an intense jaundice and amenorrhea of long standing, and recited the following history: Her father is in good health; the mother died of "dropsy," the primary cause of which she does not know. Her brothers and sisters are in good health. So far as she knows, there is no hereditary taint in the family. As a child, she had diphtheria and the other less serious diseases of childhood.

The menstruation began at the age of seventeen; was always regular and normal in every respect until about two years ago. In fact, until this time, she claims to have been in a perfect state of health, weighing 126 pounds. Her attention was first directed to the appearance of so-called "liver spots" about the face and chest; the menstruation disappeared; a slight cough with expectoration developed, and she lost weight rapidly. Following this she was confined to her bed for a period of eight weeks with "inflammatory rheumatism." She recovered in due time from this illness, and has felt fairly well and strong during the past year.

About a month ago she was informed by her friends that her "color was not good;" since then the skin and "whites of the eyes" have been becoming more yellow. It is this which brings her to the physician. She complains of a slight degree of weakness, drowsiness, and a "fullness in the abdomen." These symptoms are, however, of minor importance to her. She has had no pain in the abdomen, no dyspnea, no palpitation, no swelling of the extremities; her appetite is good, and her food distresses her in no way. Since the jaundice appeared she has noticed that the urine is of a dark brown color, that the stools are yellow, and have never been gray or clay-colored. There has been no itching of the skin.

Physical examination (March 5, 1904) revealed the following: The patient is considerably emaciated, muscles poorly developed, bony frame

small. The skin and mucous membranes are quite yellow, indicating a marked degree of jaundice. No enlargement of the lymph nodes.

The thorax is flat, the intercostal spaces quite apparent, the expansion of the chest poor. The apex beat is in the fourth interspace in the mammary line, somewhat accentuated. The heart and lungs are normal.

The abdomen is considerably distended, especially in the epigastric region. The superficial veins of the abdomen are somewhat distended, those of the thorax more so. The percussion note is absolutely dull over that part of the abdomen above the umbilicus, and quite tympanitic over the lower half. It is quite evident that the dullness is attributable to the enlarged liver. The upper border of the liver extends to the lower border of the fifth rib. The lower border on the right side extends almost to the crest of the ileum, the middle within two finger breadths of the umbilicus, and on the left side to the margin of the tenth rib.

The margin of the liver is hard and sharp, especially on the right side; the surface, which is nicely palpable in the epigastric region because of the thinness of the abdominal wall, is finely nodular, with here and there a larger nodule on the surface. The entire mass moves on deep inspiration. Palpation elicits no pain.

There is no evidence of the slightest degree of ascites.

The spleen is markedly enlarged, extending three-finger breadths below the free margin of the ribs and the margin of the liver on the left side. Weight, 106; temperature, 99; pulse, 111.

The examination of the blood reveals forty-five per cent. of hemaglobin, 10,900 leucocytes and 2,972,000 erythrocytes. The leucocytosis is due to an increase of the polynuclear leucocytes and the small lymphocytes.

The urine has a specific gravity of 1.016, is of a dark brownish color, acid in reaction, contains a large amount of bile pigments, no albumins, no sugar and no abnormal morphotic elements.

The feces are of a light yellow color, formed, contains no blood, or mucous.

The expectoration, a clear mucous, contains no tubercle bacilli.

June 3, 1904—Patient states that she feels considerably weaker, that the abdomen is swollen more than usual, complains of palpitation of the heart and slight dyspnoea upon exertion.

The physical examination (the fourth one made since the first visit of the patient) reveals for the first time evidences of ascites. The quantity of fluid, however, is not great. The liver has enlarged slightly since the first visit; the upper border now extends to the lower margin of the fourth rib, the lower border extending almost to the umbilicus in the median line. The apex beat of the heart is just under the nipple. The superficial veins of the thorax are more prominent, those of the abdomen being but slightly distended.

The patient breathes with some difficulty, especially in the reclining posture; respirations, 30 per minute; pulse, 120. Rough vesicular breathing over the entire chest; no rales. Slight enlargement of lymph nodes in the inguinal and cervical regions.

This form of cirrhosis of the liver has been known for about twenty years, but has only been accepted as a clinical entity of recent years. For some unaccountable reason a large majority of the cases recognized, and especially the earlier ones, were in France.

The etiology is in no sense clear. Syphilis and alcoholism seem to play no role in its production.

No cause can be found in the history of the case here presented. The patient has never had syphilis and has never used alcohol, and there is no evidence of either in the family.

The most logical theory as to the etiology of hypertrophic cirrhosis seems to be that of infection. No specific germ has been isolated, but the probabilities are that the infection takes place very gradually through the intestinal tract.

The point of chief interest in our case, aside from the interesting train of symptoms and physical findings, is the occurrence of the disease in a female. That it should occur in a young person is not unusual; on the contrary, the disease seems to occur largely in youth. Cases have been reported in infants.

In many cases ascites never develops, in others only toward the end of the disease. In this case it has developed somewhat earlier than was anticipated. It is doubtless an ominous sign. The patient is and has been able to be about constantly, making her visits regularly to the office.

The treatment can be only palliative. Calomel has been highly recommended by Nothnagel, Sacharjin, Sior and others; in this case, however, its administration has accomplished no perceptible results.

TUBERCULOSIS OF THE MESENTERIC LYMPH NODES— REPORT OF A CASE.*

BY CLIFFORD U. COLLINS, M. D., of Peoria, Ill.

The source of infection in abdominal tuberculosis has long been in question. Recent experiments (*Jour. of Med. Research*, Vol. v, December, 1903) show that the tubercle bacilli can enter the body from the intestinal tract without causing a lesion of the intestinal mucous membrane. In the case herein reported no history of tuberculosis in the family could be elicited. There was no evidence of tuberculosis elsewhere in the body of the patient. The node involved was in the mesentery of the jejunum, the most probable point for absorption to occur from the

*Case reported to the Peoria City Medical Society, April 5, 1904.

intestinal tract. Therefore, in this case, it seems reasonable to suppose that the source of infection was from the intestinal tract.

The patient was seen in consultation with Dr. G. H. Weber, who kindly furnished the history of the case previous to operation.

Miss J. K., aged twenty-five, single and a clerk in a store. The parents are living, and no history of tuberculosis in the family could be obtained.

The illness dates back to about March, 1902, with symptoms of constipation, which kept getting worse. About March, 1903, symptoms referable to the abdomen commenced with general heaviness and bloating, which persisted for a time, and then disappeared, only to reappear at intervals of several days with constant headache, coated tongue and general feeling of malaise. She ascribed this to malaria.

In July, 1903, she had several attacks of pain, both shooting and dull, in both right and left iliac regions, with considerable tympanites. In August she had a more severe attack. She could hardly walk because the pain was so severe. The patient was seen by Dr. Weber at this time. The temperature was 101° , pulse 120; there was considerable tympanites and great tenderness in the right iliac region. There was some tenderness over the entire abdomen, which would not allow much palpation.

In November the pain shifted suddenly to the left iliac region. From then on the temperature ranged from 99° to 100° , pulse 95 to 110.

The writer saw her about February 15, 1904. The abdomen was tender on pressure over McBurney's point. Temperature 99° , pulse 112. A hard round mass about the size of a hen's egg could be felt in the center of the lower abdomen, about one and one-half inches below the umbilicus. The abdomen was soft. The urinary examination revealed nothing abnormal.

The patient was taken to the Cottage Hospital, and operation performed on February 17, 1904. A median incision was made just below the umbilicus, over the mass, which was found in the mesentery of the small intestine. The abdomen was explored, but nothing else abnormal except a movable right kidney, which was known of before, was apparent to the eye or touch. The appendix was found adherent, and of more than average length, and was removed. The round mass was removed. In doing so, the blood supply of a portion of the intestine was interfered with, and that portion was resected. The ends were united with a Murphy button, reinforced with interrupted Lembert sutures of fine catgut.

The incision was closed with three longitudinal aluminum-bronze wires. The mass was found to be the remains of an enlarged node filled with calcareous matter. It proved to be a tubercular node which had undergone calcareous degeneration.

The convalescence was reasonably smooth. The Murphy button was passed on the fifteenth day. A mild phlebitis developed in the left leg on the twentieth day.

Dr. Weber reports today (April 5th) that the evidences of the phlebitis have practically disappeared. The temperature and pulse are normal, the patient is eating well and has improved in every respect.

The thickness of the wall of the resected portion of intestine, and the size of the valvulæ conniventes, show that it came from the lower portion of the jejunum. This is corroborated by observations made during the operation. The intestine presented no evidence of tuberculosis.

TUBO-OVARIAN ABSCESS WITH BEGINNING GENERAL PERITONITIS.—SALPINGO-OOPHORECTOMY. — RELAPSE
AT NEXT MENSTRUAL PERIOD.—VAGINAL
INCISION.—RECOVERY.

BY FRED. J. TAUSSIG, M. D., of St. Louis, Mo.

The following case of streptococcic infection of the pelvic organs presents certain clinical features that are of more than usual interest.

The patient, Mrs. C., of East St. Louis, twenty-eight years of age, had been twice pregnant. The last time (November, 1903) there had been a miscarriage at three months' gestation, with sepsis following, necessitating a curettement. Recovery was apparently complete. Menstruation normal. In January her periods lasted from the 2d to the 6th, and were of the usual character. In February the flow was scanty, lasting from the 2d to the 3d, inclusive. The patient felt perfectly well until March 3d, when she again commenced to flow, and at the same time began to have severe cramping pains in the lower abdomen, particularly on the right side. The blood was somewhat clotted, but no large pieces were expelled. On March 5th, two days later, she had a chill, followed by fever, which ranged between 101° and 103° , the pains increasing in severity.

On March 7th I was called in consultation by the family physician, Dr. C. A. W. Zimmermann. The patient had been removed to Henrietta Hospital, in East St. Louis, and put upon the usual palliative measures for pelvic inflammation. I found, on bimanual examination, a very sensitive, somewhat fluctuating mass on the right side; the uterus slightly enlarged and pushed to the left; the left adnexa normal. The diagnosis lay between tubo-ovarian abscess and ectopic pregnancy. As the bloody discharge from the uterus persisted and the mass grew larger in size, I was somewhat more inclined toward the latter view in spite of the fever, which fluctuated between 101° – 102° . The pulse ranged between 100–120; regular, but rather small in volume.

As there was no improvement under palliative treatment, and the mass now extended well up over the pelvic brim, I decided to operate. On March 10th the abdomen was opened. The pelvic contents were

found closed off by the intestines, the latter showing the dullness and injection characteristic of beginning peritonitis. As they were freed, pus welled up from the right side. The abscess lay on the right tube and ovary, and had partially ruptured into the pelvis. The adnexa of that side were removed, an incision made in the posterior vaginal fornix, and the area drained by gauze, both vaginally and through the lower end of the abdominal incision. The recovery was strikingly rapid. From the fifth day on there was no trace of fever. Drainage was continued for eight days. Both abdominal and vaginal wounds healed without trouble. So rapidly did the patient regain her health that by April 1st she was almost ready to be discharged from the hospital; there was no longer even the slightest tenderness on vaginal examination. As a matter of precaution, however, the patient was still kept in bed.

Suddenly, on April 7th, just when her menses were again due, she began, without apparent cause, to have abdominal pains and fever. This time the trouble was localized in the left side. A mass could soon be made out lying in the left parametrium, and, as it grew, extended toward the bladder; it gave rise to severe vesical tenesmus. Again palliative measures failed, and on April 15th a vaginal incision was made, and pus drained from the parametrium and tube of the left side. The patient made an excellent recovery, outside of a mild cystitis; which, however, also readily yielded to treatment.

It is interesting to observe how rapidly the patient regained her health after the first operation, in spite of the objective findings of a beginning general peritonitis. I had made a very unfavorable prognosis immediately after the operation, and was more than pleased at the course of events.

The most striking feature of the case, however, is the coincidence of the two attacks with the menstrual periods. It is not so unusual to see an inflammatory process exacerbate during this time. More unusual is it to have the process spring up suddenly, like a clap of thunder in a clear sky, as it did in this case. The rational explanation is, of course, that the increased congestion at menstruation served to light up processes previously dormant. In view of the absence of any other factors that might account for the second attack, and the apparently complete recovery from the first operation, I am strongly inclined to the view that a similar period of congestion was responsible for the return of the trouble at this time. Although we are at times powerless to prevent the return of such attacks, I think the deduction from cases such as mine must be, that after severe infections of the genital tract it would be well, even in the absence of further symptoms, to have our patients kept as quiet as possible during at least the succeeding five or six menstrual periods.

EDITORIAL COMMENT.

SOURCES OF TYPHOID FEVER.

Up to the present time two ideas seemed to be established and were taught in all text-books, and by almost all authorities: First, that in the majority of cases typhoid infection is to be attributed to contaminated water, and, second, that typhoid is a pathologic entity, always due to the infection with one and the same pathogenic bacterium. Up to the present time the infectiousness of typhoid is generally considered as very slight, and therefore negligible, while the efforts of all civilized nations are directed mainly to the purification of the water supplies to exterminate the disease.

The truth of these time-honored conceptions has been gradually undermined during the last few years, so that now every impartial judge would call them at least one-sided. Like in many other problems, it is due to Koch that in the typhoid problem new ways have been opened and a clear light is beginning to dawn. Koch's initiative was caused by a careful investigation of a local typhoid epidemic in a town in Germany, and his conclusions from this investigation were, in a general way, the following:

In larger cities it is possible to practically eliminate typhoid by the careful supervision, not only of the water supply, but also of the absolute extinction of danger impending from fecal or other discharges. In smaller communities, and in the country, this is not possible, and so typhoid will occur there as an epidemic disease.

Epidemiologically, two forms of the appearance of typhoid fever must be recognized: One, the explosive epidemic form, that is mostly due to water, sometimes to milk contamination; instances of this form in our country are not lacking; they are easily recognized as such and are not an independent form, but only an exacerbation of the second, the endemic form of typhoid that occurs wherever opportunity is offered without regard to condition of water and soil, but only due to the infectivity of infected human beings. In this city much has been said about the danger incurred by using the so-called contaminated Mississippi river water. A real epidemic which, in view of the lack of natural immunity against typhoid in man must, in a city like St. Louis, reach tremendous proportions has never existed, and the comparatively small increase or decrease can be much better explained by other factors than water contamination. That this is true is shown by the latest typhoid calamities in the East, the percentage there was immeasurably higher than it ever was in St. Louis. Typhoid is primarily endemic, and epidemics are only its exacerbation. To fight against typhoid does not

mean alone the protection of the water, and eventually of the milk supply, it means and must be primarily the attempt to make the typhoid fever patient innocuous, to prevent him from causing infection of other individuals. If this can be done the care of water and milk may return to a simpler method than is necessary to-day.

The contact infection of typhoid, so long neglected, stands to-day in the foreground of our interest. That it existed was well known, but that its danger had such a wide range, as we now know it has, is due to our increased knowledge about the time during which typhoid bacilli can exist in all the excretions of reconvalescents from typhoid fever. It is due to the fact that typhoid is not only an intestinal infection, but that its causative agent is present in immense numbers in all of the tissues of the infected individual. The disinfection of the excreta of typhoid patients has, if we consent to be credulous, become a general usage, but it is not widely enough known that the same individuals after their recovery, are liable to discharge immense masses of typhoid bacilli. In some cases the feces contain almost a pure culture as long as forty weeks. As a rule, three weeks may be considered as a probable limit, but there is no certainty about this in the individual case unless the strictest control is kept. Who thinks nowadays of examining urine and feces for the bacilli and making the discharge of the patient dependent upon their disappearance? In many cases so-called epidemics have been traced to this fact, and very instructive instances for this may be found in the literature. Typhoid can, therefore, only be exterminated by strict isolation of the patients till the time when, after repeated attempts they are found to be free from typhoid bacilli.

The danger arising from this post-typhoid excretion of bacilli is increased considerably by many cases of individuals, carriers as we know now of the typhoid bacilli, but not showing the clinical symptoms of the typhoid infection. This danger is certainly frequently greater than that menaced by the real typhoid fever. If we consider the immense multiplicity of opportunities that are given to such individuals to infect others (our hands almost constantly show the presence of coli bacilli; in any trade, in any profession, many such possibilities exist), it becomes apparent that endemic contact typhoid represents the real figures in our typhoid statistics. Epidemics are easily differentiated by their disproportion to these figures. Everybody knows that they are always extraordinary occurrences, and that only in such cases is it necessary to scare the public by warnings as to the danger imminent from the use of the water supply. Any epidemic must necessarily be followed by an increase of the ordinary endemic rate.

In another line, as mentioned before, the consideration of typhoid fever has also changed. The experiences of the last few years have made it certain that clinical typhoid is not always typhoid, but that the infections with a number of different organisms make up the totality of

the typhoid cases. That these facts have not found a more general confirmation so far is partly due to the unscientific way in which the agglutination or Widal test is made almost everywhere; the test as made is practically without meaning as to the identification of the specific organism in the given case. Typhoid is a group of diseases initiated by more or less nearly related micro-organisms; the differentiation of the latter is easily possible, and under certain conditions upon this differentiation the character of important sanitary measures in public and private life must depend.

The lesson to be drawn from these remarks is, that the fight against typhoid must be based on the investigations made on the endemic dissemination. Without this typhoid epidemics cannot be avoided.

THE RUNGE MEMORIAL MEETING.

A number of friends of the late Dr. Runge arranged a meeting to give expression to the regard which his work and life had inspired among them. This small group was made up of men engaged in various pursuits of life—physicians, lawyers, teachers and business men. The varied character of this committee typified the wide influence of Dr. Runge's personality. At the meeting itself short talks on the various phases of Dr. Runge's life, his individuality and his work were given, and the final word was devoted to the civic lesson which the story brings out. Such a testimonial is seldom given to medical men and even less than seldom to those who devote their energies to the betterment of civic institutions of which they are in charge. For this reason alone this meeting should be remembered with a certain amount of pride for the impulse, for this meeting came in a large measure from citizens who were not physicians. There is, however, a bitter truth in this thought also, and this touches at the source of much that is bad in the medical institutions of a civic nature in this city, and that is that until the medical profession, or that part of it which is strongest and best, support with enthusiasm those among them who are doing good work in the city hospitals and institutions of a like nature, so long, except in rare instances, will their efforts receive neither recognition nor notice from the public whom they are serving. The civic lesson, brought out in a general way at the meeting, points out the course which must in the future be followed, so that the sacrifice of a good civic servant and a good civic physician may be avoided. The matter is plain enough. The city institutions that have to do with the care of the sick of whatever nature must be removed from the influence of machine politics of either party. A non-partisan board of trustees and a visiting staff, where it is possible to have them. This is the civic lesson translated into terms of medical progress.

MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE.

IN CHARGE OF

JESSE S. MYER, M. D.

The Sounding and Radiography of the Large Intestines.—SCHULE (*Archiv fuer Verdauungs-Krankheiten*, Vol. x, Part 2.)—For many years investigators have been endeavoring to solve the problem of sounding the colon; during the past few months the agitation of this subject has received a new impetus. As early as 1862, Wachsmuth maintained that under favorable circumstances it is possible to pass a tube, 166-196 cm., long as far as the valve of Bauhin.

Simon carried out a series of investigations on the cadaver a few years later and came to entirely different conclusions. He found that it was sometimes possible to pass the tube into the descending colon, but no further. As a rule the sigmoid flexure formed a figure eight through the pressure exerted, and the tube did not pass beyond the sigmoid.

Leichtenstern, Vaunyn, Boas and Kuhn have come to the same conclusion.

The latter found that the tube was usually halted on its course in the sigmoid and that this portion of the intestine was pushed upwards, thus giving the impression that the tube was passing into the colon.

He believes that through combined manipulation and the careful use of the spiral tube, it is possible to prevent this curving of the sigmoid, and to introduce the tube further into the colon.

The author, who carried out an extended series of investigations, claims that it is not possible to introduce a tube into the colon with any degree of certainty, and he doubts if the living being has ever been catheterized successfully, at any rate there has been no proof of it.

He made a series of radiographs, both from the living and the dead, showing the course and position of the tube in the sigmoid. Very often when the tube seemed to have passed nicely it was completely rolled up in the sigmoid. In some of his experiments the peritoneum was opened and the course of the tube was watched and even controlled. Even in these cases it was almost impossible to pass it into the colon. The series of radiographs presented in this article are very instructive.

The colon tube cannot be used for diagnostic purposes where tumors and stenoses are suspected, for it would be impossible to determine whether the tube was meeting with one of the natural obstructions and obstacles in the sigmoid or an abnormal condition.

As to the therapeutic value of such a procedure, the author believes that practically the same end can be accomplished through rectal enemas properly applied. Mosler showed that the fluid introduced into the rectum came out through a fistula in the cecum. He also demonstrated areas of absolute dullness in the cecal region after the injection of large amounts (three to four litres) of water into the rectum.

Boas maintains that the succussion sound obtainable in the cecal region after rectal injections shows the presence of liquid in that region.

The author demonstrates very clearly through his radiographs that fluid injected into the rectum may reach the cecum. He injects 300 to 400 cm. of oil containing a considerable quantity of bismuth in suspension into the rectum of a patient in the knee-elbow position. The radiographs of these cases give such definite outlines of the colon that there can be no doubt as to the course taken by the oil mixture. In all of these cases the ilio-cecal valve proved sufficient, so that no shadow was obtained beyond this point. These pictures not only prove that it is possible to "wash out" the colon through the simple rectal enemata, but also show the position of the transverse colon. In one of these cases enteroptosis is beautifully demonstrated. The method will certainly prove of great value in the determination of the topography of the colon in the living.

SURGERY.

IN CHARGE OF

WILLARD BARTLETT, M. D.

Perforating Ulcer of the Stomach.—GUIBAL (*Revue de Chirurgie*, No. 2, 1904).—Four cases are reported, three from the autopsy finding and one from the operating room. In the first three no diagnosis was made, but the fourth was correctly interpreted before the operation, and the life of the patient was saved. Here there was a history of stomach trouble of long standing, with features so characteristic of ulcer, that the acute onset of desperate abdominal symptoms, high up, was to say the least, highly suspicious. The operation which was done eight hours after the onset of symptoms, presented many interesting and unusual features; the stomach was found full and distended, accounted for by the fact that the perforation was high up on the lesser curvature near the cardiac extremity, and every time the viscus was manipulated a little of its contents were simply spilled, so to speak. After suturing the defect the abdomen was drained in a truly wonderful way. In addition to draining the two lumbar regions and that of the stomach out of the original incision, three more incisions were made in the lower abdomen and one in the vagina, through which fluid poured, and through the last of which it continued to escape for six days although there was no such continued drainage from any of the others.

Such extensive destruction of the continuity of the abdominal wall necessitated the patient remaining in bed two months, but she ultimately recovered.

The Post-operative Appearance of Echinococcus Cysts.—MADELUNG (*Mitteilungen aus der Grenzgebieten der Medizin und Chirurgie*, Band xiii, Heft 1).—Articles from the pen of the acknowledged master of the surgery of this subject cannot fail to attract attention. Madelung relates here the first personal experience of his own of secondary growth,

after performing seventy-five echinococcus operations. The patient in question had a cyst removed from the liver at one sitting, and two years later presented himself with two distinct cysts in the skin scar. There can be no doubt that this was due to an accidental infection at the first operation. It is interesting that lengthy suppuration of the sac as well as the antiseptic solutions of all sorts have been ineffective in preventing the return of this parasitic disease, when one might naturally suppose that these, the causal agents, would be killed easily. This experience of Madelung has a direct bearing upon the surgery of intraperitoneal recurrence; it happens that the technique of complete removal of a cyst with immediate suture of the defect, allows of a very short convalescence, but at the time of the operation exposes the patient to a much greater danger of dissemination of the parasites. This is to be especially avoided since secondary growths may occur and animal experiments have shown that they are totally inoperable if so situated.

Acute Post-Operative Decubitus.—VANVERTS (*Bull. et Med. de la Soc. de Chir. de Paris*, Tome xxx, No. 12).—This is said by the author to be a lesion of comparative rarity, and occurs chiefly after operations upon the female pelvic organs. It has also followed symphyseotomy and resection of the sacrum. When it occurs after long compression of the sacral region upon a hard operating table the connection is easily seen, but there is more to it than might at first appear, and Boudron regards it as a trophic disturbance comparable to one following a spinal lesion. The trouble is said to be due to the irritation or destruction of certain nerves within the pelvis and there is propagated along their connections which enervate the superficial tissues, the trophic disturbance which results in decubitus. Infection has been said to play a role in these cases, but no more can be said in this line than has already been known concerning such complications of typhoid and other febrile affections. Infections play their most important role in neglected cases where there is already a decubitus.

Aneurism of the Subclavian.—OBERST (*Beitrag zur klinischen Chirurgia*, Band xli, Helt 2).—By far the most aneurisms of this artery, arise from that portion of it which is between the clavicle and the rib; this being explained by the circumstance that injury to this portion of the vessel is more likely to be serious, since it is prevented by its surroundings from gliding out of the way. Only sixty-seven of these cases have been reported since the beginning of the antiseptic era, though 121 of them had been known up to that time. A very interesting operated case is reported from the Freiberg clinic; there was a complete cure attained by proximal ligature, no radial pulse ever appearing after the ligature was tied, and the tumor gradually continuing to shrink up to the time the patient was last seen, months later. Experience has shown that there is no parallel between the blood supply of the upper and that of the lower extremity; so the danger which is present of gangrene of the leg after ligation of the femoral, does not obtain when the subclavian is treated likewise. In many cases the radial pulse appears immediately or at least soon after ligation of the subclavian and, unfortunately, it is just these cases which are least benefited by the procedure. Most of the cases have

affected the right side, and the mortality which was very high after all sorts of surgical treatment, in the pre-antiseptic era, is now sunken to 22 per cent. The author's conclusion is that central ligation is the normal procedure in these cases, that extirpation of the sac is to be undertaken only under especially favorable circumstances, and that distal ligation is very uncertain as to its results.

Some Observations on the Surgery of the Common Duct of the Liver.—MAYO (*Medical Record*, April 30, 1904).—This eminently practical article, replete as it is with the vast experience of the author, contains many suggestions which can be followed with profit, by every surgeon. Stress is laid upon the fact that most of the stones form in the gall-bladder and that surgery is to be contemplated at a time when they have not yet left that viscus. With the cystic duct permanently closed, the gall-bladder is better out than in and the operative indication is whether or not bile can be made to enter the viscus upon the table; the operation is to be performed from below upward.

Where the bladder contains bile and is not to be removed, provision must be made for drainage onto the skin. Deep stones in the common duct frequently make no symptoms, hence it is imperative to examine the duct at every operation; then if icterus be present the duct must be opened and probed with the finger, else stones may be overlooked.

If dense adhesions be present it may be best to split the bladder and duct clear to the stone, after which the bladder can be removed and the duct sewed up. The reparative power of this duct is unexcelled, according to Mayo, hence all sort of plastic procedures may be practiced upon it without fear.

Another method of dealing with cases, in which removal of the bladder is indicated in the presence of dense adhesions, is to simply skin out the mucous membrane without exposing the patient to the dangers of separating the adhesions. Some doubt as to the possibility of this procedure has been expressed, but the reviewer takes pleasure in adding from personal observation that W. J. Mayo does remove this membrane in one piece and does it in a very short time.

Trophic and Circulatory Troubles of the Skin Due to the Injection of Paraffine.—SEJOUR (*Gazette des Hopitaux*, No. 45, 1904).—Two injections were made into the breast of a young woman, one three weeks after the other. Great pain with swelling of the breast and axillary contents followed the first operation, but subsided. Five days after the second injection trouble commenced. When the patient was seen a month later the skin was high-colored and glistening, with the periphery of the breast looking as though there were varicose veins everywhere, and at one point a soft, almost fluctuating spot. There was no axillary involvement or other manifestation which could be regarded as inflammatory. Upon free incision of the softened area there escaped the softened paraffine which had been injected, but no exudate, as was proven by microscopic examination of the mass. Under the influence of wet dressings, etc., the whole thing cleared up, and the author is under the opinion that some of the paraffine must have been injected into blood vessels and caused thrombosis of them, thus causing all the symptoms.

The Treatment of Pulmonary Tuberculosis by the Direct Injection of Iodoform-Glycerine Into the Lung Tissue.—GESSNER (*Zentralblatt fuer Chirurgie*, No. 16, 1904).—The author uses a 10 per cent. emulsion of the above-mentioned nature, and claims to have seen remarkable results with it. His reasoning proceeds from the fact that iodoform is regarded as a specific against the activity of the tubercle bacillus in joint-affections, especially early in the trouble. His good results have been obtained only in very early cases—*i. e.*, before destructive changes have taken place. The patients are kept in bed four to six weeks, and 5 cm. of the emulsion injected every ten days or two weeks. The only unpleasant symptom which has been noted is the presence of severe pain for some days, due, as he supposes, to the action of the glycerine.

One Hundred Cases of Gastro-Enterostomy for Simple Ulcer of the Stomach and Duodenum.—MOYNIHAN (*Annals of Surgery*, May, 1904).—The average age of these one hundred patients was thirty-five years, and to the author's credit let it be said that he lost but two of them. In fifteen cases hemorrhage was the cause of the operation; and of these, one was lost. Dilatation of the stomach and stretching of the ulcer seems to the author to be the direct cause of the bleeding. The phenomenon has been noted in all the cases upon which the author has operated, being of unusual degree in many of them. Vomiting after the operation occurred in three of these one hundred patients, stopping on the tenth day in one, lasting a year in another, and necessitating a supplementary enterostomy in one at the expiration of fifty-six hours after the original operation. Post-operative pneumonia in these patients is explained by inspiratory infection of material from rotten teeth; hence great care is given to this particular branch of the toilet by our author.

In ninety-two cases the result was all that could have been desired; in the other six, great disturbance was continued in consequence of the persistence of an excess of hydrochloric acid, although this subsided in three.

In two instances the condition was diagnosed as malignant before operation, and in one other it really proved to be malignant, although this was not suspected at the time the man was operated upon.

Encysted Purulent Pleuritis.—VANVERTS and DANCOURT (*Archives Provinciales de Chirurgie*, Tome xiii, No. 3).—After giving all the theoretical knowledge which is common property on the pathology, symptomatology, prognosis, etc., of the interlobular variety, the authors take up the treatment, which is of most interest to us, since it contains the individual element of the authors' own success. In the interlobular variety, expectant treatment with spontaneous rupture into the air-passages has given 77.7 per cent. of cures, while surgical treatment has been successful in but 74 per cent. of cases thus treated. This might at first seem to indicate a waiting policy in all cases, but such is not the case; for the reader must remember the fact that most of the favorable cases are treated medically, while all the hopeless ones are consigned to the knife. Puncture is to be condemned as a therapeutic measure, and free incision only performed.

The Question of Mechanical Injury to the Omentum as a Result of the Trendelenburg Position.—BAKES (*Archiv. fuer Klin. Chir.*, Band lxxii, Heft 3).—Since Kraske called attention to the dangers of this well-known and much-used position, the present interesting observation of the author may be cited as an example sufficiently similar to impress upon the reader the truth of Kraske's statements. The patient, a man fifty-three years of age, earned his living as an acrobat by performing nearly all his tricks while walking on his hands. He suffered from the presence of a tumor in the upper portion of the abdomen, and had been compelled to reduce the amount of food taken at a time to the smallest possible minimum. At the operation his omentum was found rolled up around the transverse colon and stomach, as well as attached to the liver across its whole length. Secondary shrinkage of the colon had taken place till the stomach was greatly reduced in size thereby. After the adhesions were divided and the viscera restored to their natural positions, the man's symptoms all disappeared and his recovery was rapid.

THERAPEUTICS.

IN CHARGE OF

ALBERT E. TAUSSIG, M. D.

Lumbar Puncture in Uremia.—SEIFFERT (*Muench. med. Wochenschr.*, 1904, No. 10).—In the course of a severe epidemic of scarlet fever characterized by an unusual frequency of nephritis and many deaths from uremia, the writer had occasion to study the effect of lumbar puncture upon the latter. He noticed that every such case, upon which this procedure was practiced, ended in recovery. In one case, the effect of lumbar puncture was particularly striking. The patient was a school boy who had recently had scarlet fever followed by a nephritis with extreme and general anasarca, and who was brought into the hospital comatose and breathing stertorously. Half an hour after lumbar puncture had been performed, the patient had become completely conscious, sat up in bed and asked for food. The next day another paroxysm set in, which again yielded to the puncture, whereupon an undisturbed convalescence followed.

As the writer's observations were confined to uremia on a scarlatinal basis, the question as to the effect of lumbar puncture upon uremia, due to other forms of nephritis, remains open.

The Treatment of Gastric Hyperacidity.—L. FISCHL (*Prag. med. Wochenschr.*, 1903, No. 10-12; *Zeitschr. f. Diætet. u. Phys. Therapie*, 1904, No. 2).—Pawlow's treatment of hyperacidity by means of olive oil has received additional support through Fischl's extensive observations. In a series of nineteen cases, in which the total acidity of the gastric contents, after a test-breakfast, varied from 70 to 114 and the free HCl from 62 to 102, he used a vigorous oil treatment. During the first week of treatment, the patients were put on a strict

hyperacidity diet (bland and poor in carbohydrates) and took, in the way of drugs, either alkalies or atropine. Beginning with the second week this medication was stopped and, the diet being continued, the patients were put on pure olive oil, one tablespoonful in the evening and three tablespoonfuls before breakfast. The dose of the oil was gradually increased to 50 gm. in the evening and 150 gm. before breakfast. This regimen was continued for three weeks; for one week longer the diet was persisted in without the administration of the oil, whereupon the patient returned to his usual way of living. During the entire course of treatment weekly analysis of the gastric contents were made in all cases. Only those were reported in which the patients remained under observation at least three months.

In six cases the cure was complete and permanent, both objectively and subjectively. In three cases, after a temporary improvement, all the symptoms of hyperacidity reappeared when the patients resumed their ordinary diet. In six cases, in spite of all care, it was found impossible to establish a tolerance for the oil on account of the resulting vomiting, eructation or anorexia. Finally, four patients who took the oil readily, showed at no time any improvement in their condition. These results, while perhaps not astonishingly good, are still such, in view of the unsatisfactory results obtained in the treatment of hyperacidity by other methods, as to merit attention. Where the olive oil is not well borne by the patients, the writer suggests replacing it by milk fat—one half pint of cream and one and a half pints of rich milk to be taken daily. The writer prefers milk modified according to Dungert's method (the so-called "pegnin-milk"). Those cases that resisted the treatment with olive oil were found also not amenable to the milk treatment. In seven cases, however, in which the olive oil cure had to be interrupted on account of the resulting vomiting, etc., the milk cure produced satisfactory results.

The Digestibility of Peas Prepared with Hard Water.—RICHTER (*Archiv f. Hygiene*, 1903, vol. 46, No. 3; *Zeitschr. Diätet. u. Phys. Therapie*, 1904, No. 2).—It has long been known that water rich in lime or magnesium salts (so-called "hard" water) is unsuitable for the boiling of certain foods such as vegetables, tea, coffee, etc. The cause of this observation has been sought in an investigation undertaken in Prof. Rubner's laboratory with special regard to peas. It was found that when prepared with hard water, small hard fragments of the vegetable were formed which were insoluble in the digestive fluids and which appeared unaltered in the stools. They not only escaped utilization in the economy, but on account of the earthy-albuminates and earthy-soaps they contained acted as irritants, producing flatulence, colic with diarrhea and a foul-smelling stool.

The Treatment of Subacute Gastritis.—HORATIO C. WOOD, JR. (*The Therapeutic Review*, January, 1904).—In the care of subacute gastritis our treatment must be along three distinct lines, each one of which is of great importance if we wish to obtain the best results. These are regularity in the patient's habits, a proper diet and the use of drugs.

HABITS.—Besides regularity in the time of eating, the patient must be

impressed with the necessity of thorough mastication. The value of chewing the food depends not solely, as was formerly believed, upon the mechanical effects of the minute subdivision of the mass, but also on the consequent complete ensalivation. Salivary digestion in the stomach plays a part hardly secondary to that of peptic digestion. Water should be avoided during the mealtime as much as possible; not only does the fluid dilute the digestive secretions of the stomach, but it enables one to swallow the food without sufficient mastication.

DIET.—Of the starchy foods those that, like toast, stale or “pulled” bread, require considerable mastication are to be preferred. Sugar and fats had best be reduced to a minimum. Of the albuminous foods, well cooked mutton or beef, or the fish foods, such as rock fish and oysters prepared in various ways, are all of them generally permissible. Pork, veal and rich game foods should be scrupulously avoided.

DRUGS.—In the first place it is to be noted that stimulation is closely allied to irritation and that where we have a true inflammatory condition, the stimulant remedies are always contra-indicated. These include both the bitter tonics and the still more actively stimulating aromatics. In cases in which there is marked failure in the secretion of hydrochloric acid this substance may frequently be used, not only on account of its action as a digestant, but also for its antiseptic influence, with good effect. Perhaps even more efficient than the hydrochloric acid is the nitrohydrochloric acid, which should be prescribed undiluted, since it rapidly deteriorates after dilution. Of this, five to ten drops may be given in half a tumbler of water after meals. Of the artificial digestants, such as pepsin, pancreatin and the various vegetable ferments, the best that can be said of them is that they are comparatively harmless.

The one drug, which in the writers' experience, has proved of the most value in the treatment of these cases is the bicarbonate of soda. It neutralizes the lactic acid, if present, thus relieving the distressing pyrosis, it enables the salivary ferment to act by rendering the gastric contents alkaline, and finally it has been abundantly proven to be one of the most effective stimulants of the secretion of hydrochloric acid. It is best given before meals. Very frequently the addition of a sedative to the mucous membrane, such as the insoluble salts of bismuth, has a very beneficial effect upon the inflamed mucous membrane. A prescription which has given the author good results when there is much irritation is:

R	Bismuth. subnitr.....	ʒi (4 gm.)
	Sodii bicarb.....	ʒiii (12 gm.)
	Acid. carbolie.....	gr. xv (1 gm.)
	Spirit. menth. pip.....	m. xx (1.3 gm.)
	Mucilag. acaciae.....	q. s. ad f. ʒii (60 c.c.)
M.	et ft. emulsio.	
S.	Teaspoonful before each meal.	

By virtue of its antiseptic action and its astringent effect upon the inflamed gastric mucous membrane, silver nitrate is frequently valuable in gastritis. To get the best results from this drug it is necessary to cleanse the gastric mucous membrane as thoroughly as possible. A mode of treatment, which has often given good results where lavage seemed undesirable, is to have the patient drink a tumblerful of tepid or

warm water in which have been dissolved three to six soda mint tablets, and fifteen minutes later follow this by a pill consisting of:

R Argenti nitratis	gr. $\frac{1}{4}$
Extract. hyoseyami	gr. $\frac{1}{2}$
M. S. One such pill an hour before meals.	

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

CARL FISCH, M. D.

Mutation of Generation and Host in Trypanosoma and Spirochæte.—FRITZ SCHAUDINN (*Arbeit. aus dem Kaiserl. Gesundheitsamt*, vol. xx, Heft 3, 1904).—What must be considered as the most important advance in our knowledge of protozoic life during the last decades, is the result of work done by Schaudinn on the blood parasites of a little bird belonging to the order of owls. Although the paper only gives, in a preliminary way, the results obtained, their entirety is so remarkable and so full of weight for an endless number of scientific, and even practical problems, that it bids fair to inaugurate a new era in the investigation of protozoic life and of its relations to other organisms. To attempt a review of the author's publication would occupy too much space in this journal, and, besides, his paper is, as said, only an announcement of the full report that is to be made later. A short review would do injustice to the paper; it ought to be read carefully by any man interested in the subject and working in biologic lines. The new points brought out by Schaudinn may hurriedly be indicated. In investigating the owl parasites (two different forms) he was able to follow their course of development completely from stage to stage and from one host into the other. The series here demonstrated is by far more complete, as we have it for other hemosporidia, for instance, the parasite of malaria. It is shown that the sporozoite formation does not lead to identical products, but that the latter are differentiated into three forms, indifferent, male and female. Formed in the body of the mosquito they behave differently, the indifferent ones multiplying while the males disappear. The females, however, after a period of rest are able to produce again all of the three forms by a process of parthenogenesis, described in the minutest details.

Thus in the infected mosquito repeated accumulations of parasites appear, that by their bite are transmitted to the endogenous host, the owl. The latter receives during the bite all three forms; the males soon disappear, the indifferent parasites multiply in the well known way by longitudinal fission, but the females add to their number by parthenogenesis and a renewed production of all of the three differentiations. The nuclear phenomena obtaining in the divisions leading to the formation of the latter are very complicated, and do not allow of a short description; that in the production of males and females, totally opposite processes are seen, may only be shortly mentioned. All of these forms of the owl parasite appear in the shape of a trypanosoma. Arrived in the

blood of the bird they attach themselves to the blood corpuscles, remain so for awhile (in periods of twenty-four hours) to again become free. After the normal size is reached they penetrate into the corpuscles, to form here the well-known macro- and micro-gametocytes of *Halteridium*. *Trypanosoma* is, therefore, nothing but a stage of the development of such a sporozoon. Whether the *trypanosoma* species of animal and human diseases, that lately have held the attention of so many observers, will, on closer investigation, show similar relations is possible; but it may be that they are species that in a retrogressive way have become indifferent.

A sketch cannot give an idea of the manifold fascinating and instructive details that were brought out by the author. They will have a revolutionizing effect on many questions of cytologic as well as biologic and physiologic nature.

Observing from this paper into what details an investigator has to go in order to establish the cycle of development of a parasite, and so to give it a right to exist in science as a fact, the multifarious bickerings with sporozoic parasites in human diseases appear in their proper light. Even for malaria our knowledge is as yet very incomplete, there are large chasms in it; Schaudinn's work will help fill them. There are two points in this direction that cannot be neglected and that Schaudinn has firmly established. The first concerns the explanation of relapses in cases of malaria, where for a long time only the sexual forms had been found in the blood. Schaudinn has found analogous phenomena with the owl parasite, where he could demonstrate that macro-gametes by the process of parthenogenesis could give rise to new generations. For the tropical malaria parasite he suggests the same conditions, and, in fact, reports that in one case he has already directly observed the phenomenon. Certain stages of this parasite appear also in typical *trypanosoma* form.

The other point touches Koch's theory, that malaria from one year to the other can only be propagated by parasites hibernating in the body of malaria patients. In the owl parasites Schaudinn has seen that an infection of the ovaries of the mosquito not infrequently occurs, that the parasite penetrates into the eggs, is present in the larvæ in a quiescent condition, until with the change to the imago they begin their cycle of development afresh. There is no reason to assume that the same does not obtain for the malarial organisms also. The author mentions that investigations in this direction justify the assumption that it is so.

A very entrancing chapter of the paper, and one that admirably proves the ingenuity of the author in experimental work, is the one devoted to the anatomy of the mosquito, especially of its digestive and suctorial organs, and the application of this study to clear up the way the parasites take from the time of ingestion to the time where they are transferred to the endogenous host by the bite. The chapter is full of fascinating details, but does not lend itself to a short review. Schaudinn's paper ought to be read widely for the dissemination of knowledge of protozoic life, and for its instructive character as to the carrying out of work in this line.

The Relations Between the Blood Vessels and the Cells of the Suprarenals.—LYDIA FELICINE (*Arch. f. Mikrosk. Anatomie*, vol. 63, Heft 2).—The suprarenals of mice, rats, guinea pigs, rabbits and human beings were examined. Everywhere the cortex could be differentiated into three layers. Between cortex and medulla pronounced morphologic and physiologic differences exist. The cortex serves the function of resorption exclusively, while the medulla forms a typical glandular structure with internal secretion. The suprarenal has two different functions: the detoxication of the organism and the increase of the blood pressure. The former can only be provided for by the cortex, while the increase of blood pressure altogether depends upon the medulla. These conclusions were reached in the first line by exceedingly exact and ingenious histologic investigation of the glands of the above named animals. As details would lead too far, it may be said that the author succeeded in showing the following two points: The cortical cells are in such a connection with arterial capillaries (intracellular processes of the capillaries, interruption of the continuity of the endothelial lining, etc.) that an excretion from them cannot be assumed. It can be directly shown that by the arterial circulation small particles introduced into it are carried by the current into the cortical cells. The arrangement of the cells of the medulla, however, and their relation to the venous vessels allow only of assuming an excretion into the latter. These morphologic deductions are confirmed by late experiments on the suprarenals of ganoid fishes (sharks), in which medulla and cortex appear as separate organs. Of these, only the medulla has the adrenalin effect. The paper is very suggestive, and may give an impetus to a similar scrutinizing investigation of other glands with so-called internal secretion.

About the Fight Against Tuberculosis.—C. FLUEGGE (*Deutsch Medic. Woch.*, 1904; No. 8).—Fluegge opposes the views promulgated by Behring in a manner almost identical to the expressions given in a previous number of this journal by the reviewer. We cannot agree that the importance of inhalation-tuberculosis is underestimated. Even if inhaled bacilli do not directly set up a pulmonary tuberculous process, they are able to infect by the route of the lymphatic organs. For practical purposes hygiene has no reason to abandon the methods so far used to prevent the inhalation of bacilli. If it should prove true that infection during infancy is as frequent as Behring asserts, we would simply have to increase our watchfulness against the inhalation during this age, for infection through inhalation of tubercle bacilli is much more to be feared than their ingestion by infected milk. Should, however, the milk prove to be dangerous, which is still very doubtful, it would be much more sensible to kill the bacilli by boiling than to try and preserve the bactericidal power of the milk by adding formalin. Fluegge expatiates on the so far absolutely unestablished and unproven assertions of Behring as to the peculiar qualities of milk that are destroyed by preservation and by boiling. He furthermore suggests that it would be much more probable that any such substances present in milk would be to the greatest extent arrested by the saprophytic bacterial flora of the intestine. The high infant mortality must not be ascribed to boiled milk; only the poorer classes, and they only during the hot season, are affected on ac-

count of the greater difficulties in handling the boiled milk properly. Fluegge thinks that it would be a difficult task to control the formalinization of milk, and that it would unnecessarily increase the price for the poor.

GYNECOLOGY AND OBSTETRICS.

IN CHARGE OF

HUGO EHRENFEST, M. D.

The Results of the Fight Against Cancer of the Uterus in East Prussia.—G. WINTER, Professor of Gynecology, University of Königsberg (*Zentralblatt f. Gynaek.*, No. 14, 1904).—To Winter belongs the credit for a dictum which today is generally accepted by the profession the world over, namely: that not more radical methods, but solely early diagnosis, can promise to improve the lasting results of the operative treatment for uterine cancer.

In a most interesting monograph ("The Fight Against Uterine Carcinoma," published by F. Enke, Stuttgart, 1904), Winter dwelt upon the various obstacles commonly met with in the early diagnosis of and early operation upon these cases, and submitted much valuable advice as how to overcome these obstacles.

Backed by his official position as Professor of the University, Winter has endeavored to transfer into practice his theoretical suggestions, and in East Prussia, in a most methodical way, has waged a war against uterine cancer. He secured the help of the physicians by applying to the district physicians, he appealed to the trained midwives, and to the public at large by specially written articles, which were widely distributed by means of the daily newspapers. This systematical agitation began December, 1902, and just one year afterward Winter began to estimate the results of this propaganda. The above-mentioned article in the *Zentralblatt* gives a tabulated survey of these results, and certainly removes every possible doubt regarding the feasibility of the author's suggestions.

1. *Effect Upon Physicians.*—Winter insists upon a careful vaginal examination of all doubtful or suspicious cases.

While the clinical records of the carcinoma patients observed from 1898 to 1902 show that 14 per cent. of the physicians who had attended these cases had failed to make any internal examination, of the forty-five cases in 1903 who had consulted physicians previous to their admission to the hospital, only five (11 per cent.) had not been examined at the time of their first consultation. But even in these five cases acceptable explanations could be found for this omission. One patient complained only of diarrhea; another only of bladder symptoms, for which she was referred to a specialist, who made the proper diagnosis; a third patient was treated by a Homeopath; the fourth was examined at the time of the second consultation, when the diagnosis was made, and the fifth patient offered, apparently, only the symptoms of a simple endometritis.

The second desideratum of Winter is the early recognition of carcinoma by means of microscopical examination. The appeal resulted in fifty-three specimens of curettings being sent to the university for investigation, in several of which carcinoma was detected. In only two cases physicians must be blamed for negligence in this respect, one treating a beginning cervix carcinoma for five weeks as an erosion.

2. *Effect Upon Midwives.*—Midwives are urged by Winter to send every patient with suspicious symptoms immediately to a physician.

Out of the eighty-four cancer patients observed in 1903, eight had first consulted midwives; three cases were, immediately after the first examination, three other cases without any examination, referred to a physician; in one case only a midwife continued to treat a patient without an internal examination. The comparison with conditions in preceding years is striking. While the percentage of negligent midwives previously had been 54, it sank suddenly to 14 per cent. in 1903.

3. *Effect Upon Quacks.*—It so happened that none of the eighty-four patients of the year 1903 had consulted a quack. Nevertheless, the danger of the quack in delaying the proper diagnosis should not be disregarded.

4. *Effect Upon the Public in General.*—Naturally indolence on the part of the patients, ignorance concerning the symptoms, false modesty, fear and lack of either time or money, are among the main causes for dangerous delay in establishing the diagnosis and instituting proper treatment.

Winter accepted the time which had elapsed between the appearance of the first symptoms and the first consultation of a physician on the one hand, and the time between the consultation and the operation on the other hand, as fairly indicating the effect of his endeavors to propagate a better understanding of the first symptoms and the dangers of uterine cancer.

Physicians were consulted after the appearance of symptoms:

Within the first month in 1903, by 22 per cent. ; in preceding years by 14 per cent. of all patients ; after first month in 1903, by 35 per cent. ; in preceding years by 18 per cent. ; after three months in 1903, by 33 per cent. ; in preceding years, by 26 per cent. ; after six months in 1903, by 5 per cent. ; in preceding years, by 12 per cent. ; after nine months in 1903, by 5 per cent. ; in preceding years, by 18 per cent. ; after twelve months in 1903, by 0 ; in preceding years, by 12 per cent.

The time which had elapsed between first consultation and operation was up to eight days in 1903, 78 per cent. ; in preceding years, 63 per cent. ; up to two weeks in 1903, 12 per cent. ; in preceding years, 15 per cent., a. s. f. ; up to three months in 1903, 0 ; in preceding years, 5 per cent.

A few examples are cited which very instructively demonstrate the practical value of these pamphlets and articles.

1. Patient had symptoms for the last half year. On January 4th the mother read an article about carcinoma in the morning paper, and at once sends her daughter to the hospital.

2. Patient had symptoms for two months. She consults a physician who advises her to go to the hospital. She refuses to do so, but soon afterward she is easily persuaded by a woman friend who has read an article in the paper.

3. A patient has read the article which had appeared in January. In June of the same year she suffers from irregular hemorrhages. Realizing the importance of such a symptom from her reading, she immediately consults a physician who diagnosticates carcinoma in its incipient stage.

4. Cancer symptoms exist for two and one-half weeks. The husband of the patient, who has read one of the articles on cancer, insists upon the consultation of a physician.

5. Patient comes to the physician at the very beginning of the cancer symptoms, which are known to her from reading such a pamphlet on cancer.

The eminent practical value of this propaganda among the laity is proved by two facts:

In 1903, 57 per cent. of the cancer patients have consulted a physician within the first three months; in preceding years only 32 per cent.

In 1903, 90 per cent. have been operated upon within two weeks after the first consultation; in preceding years only 78 per cent.

5. *Operability of Carcinoma.*—The sum total of the effect of Winter's fight must naturally become apparent in an increase in the percentage of those cases that are still operable at the time when the diagnosis of carcinoma is made. The percentage of operability, for obvious reasons, can be calculated for a special method of operation only, since naturally widely different limits for the operability are drawn for the various operations in vogue.

The figures calculated by Winter refer to vaginal hysterectomy, combined, if necessary, with the Schuchardt incision.

The operability increased in the clinic from 71 per cent. in 1902 to 82 per cent. in 1903. In the hands of all specialists operating in East Prussia from 52 per cent. in 1902 to 65 per cent. in 1903, so that it can be said that within one year the operability has risen in East Prussia from 62 per cent. to 74 per cent.

Winter concludes from these observations that the present results are still far from being entirely satisfactory; that it seems, however, permissible to assume that this mode of propagating a correct understanding of the symptomatology and the danger of uterine carcinoma is feasible, and is capable of doing much good.

PEDIATRICS.

IN CHARGE OF

ALFRED FRIEDLANDER, M. D.

Nephrolithiasis in Childhood.—MONSSEAUX (*Rev. Mens. des Mal. de l'Enf.*, May, 1904), analyzes seventy-seven cases of nephrolithiasis, fifty-two of which were in children under fifteen, while the remainder occurred in adults, who had, however, shown the symptoms since childhood.

Fifty-one cases were males (66 per cent.), twenty-six females. With reference to etiology, the author thinks that heredity certainly plays a

role. Of direct exciting factors, excessive ingestion of nitrogenous foods, insufficiency or perversion of metabolic changes, and insufficiency of elimination as a result of too great concentration of the urine, are considered as important.

In the child, as in the adult, the gravel is uric acid pure (fifty-six cases), or consists of oxalates or phosphates, in the majority of the cases.

In most cases the first symptoms noted were pains of various kinds. These pains are either continuous or intermittent, they may be spontaneous or brought about by excessive exertion. In three of the cases the pains were of such a nature as to suggest Pott's disease, though this diagnosis was subsequently disproved in each case. Typical renal colic was noted in twenty-five cases. Most of these cases were of the uric acid variety. The picture of the attacks corresponds to that seen in adult life. Hematuria was noted in eight cases, usually accompanying the attacks of colic.

Difficulty in micturition is a common symptom. Frequent, painful urination, with the voiding of only small quantities each time, is a common symptom. This urine often contains gravel, but not much pus as a rule. Vesical hemorrhage is rare. Examination of the urine shows that it is usually of high specific gravity, markedly acid, with increase of urea and uric acid, and on microscopic examination showing crystals of uric acid, oxalate of lime, amorphous urates, and usually red blood cells.

Complications are not usually seen; even septic infection is not often found.

Association with other symptoms of so-called arthritism is, however, very frequent. Digestive disturbances, especially recurrent attacks of vomiting and diarrhea, are common.

The diagnosis, prognosis and treatment present nothing peculiar in childhood.

Cardio-Tubercular Cirrhosis in Childhood.—LANOS (*These de Paris*, 1904) says that the symptoms of this condition are usually hepatic. While the disease is one of the heart, the symptoms point to disease of the liver. [As is well known, the condition is usually due to tubercular pericarditis.—ED.]

The diagnosis rests on the following triad of symptoms, which are rarely missing: cyanosis, embryocardia, and absence of the precordial impulse to sight and touch. Other symptoms and signs which mark the progress of the affection are: smallness of the pulse, dyspnea on effort, enlargement of the liver, ascites, edemas, collateral venous circulation, polycythemia, and absolute asystole.

The prognosis (always grave) is, however, not necessarily fatal, because the course of the malady is not always progressive, and there are often remissions of greater or less duration. There have even been cases where a cure has been shown; but even in these (isolated) cases the patients are always under-developed, pictures of "infantilism," especially if the origin of the disease date back to the period of adolescence.

The treatment is a purely hygienic one, and has special relation to the antecedent tuberculosis.

The Reduction of the Tubercular Death Rate in Children in New York City.—BIGGS (*Arch. of Ped.*, May, 1904) says that there can be no question that the factor of heredity in tuberculosis, the frequent recurrence of cases in the same and succeeding generations, is largely to be explained through house infection. Special family susceptibility does, however, undoubtedly exist. He points out that where there is a case of tuberculosis in a family, an infant is always seriously exposed to the danger of contagion. There is exposure through the air, through the direct contact with the sick person. When the child creeps the danger is greater, for there is often infective sputum on the floor, and there is also the chance of inhaling bacilli from the dust on the floors. The author does not discuss the question of infection through food, especially milk. But he believes that in tenement houses the infant is more exposed to infection than any other member of the family, and this largely as a result of house infection. Exposure outside the family is hardly a factor before the age of five.

If this theory is correct, the author reasons that the preventive measures in the way of isolation and disinfection, which have been instituted in New York for the past ten or twelve years, should show some reduction in the mortality from tuberculosis in the earlier years of life.

He has, therefore, collected the statistics showing the deaths from pulmonary tuberculosis and from tubercular meningitis in the last twenty years. These data (which, unfortunately, cannot be given here in full) show that during the ten-year period ending in 1902, there had been a decrease of more than 40 per cent. in the death rate from pulmonary tuberculosis and tubercular meningitis in children under fifteen years of age, and that during a period of twenty years the decrease has considerably exceeded 50 per cent. In 1892 the death rate from these causes was 5.0 per 10,000, and in 1902 it was 2.96.

With an extension of the regulations, with wider information as to the nature of the disease, still further reduction of the death rate in early life is to be looked for. The author sees in these data great encouragement in the crusade against tuberculosis.

Tonsillitis a Cause of Acute Nephritis.—MORSE (*Arch. of Ped.*, May, 1904) says that while the importance of tonsillitis as a cause of acute endocarditis has been clearly recognized of late, little attention has been paid to it as a factor in the production of acute nephritis. Inasmuch as tonsillitis is due to bacterial infection, most often streptococcus, it seems reasonable that, as in the case of scarlet fever, such infection should occasionally produce an acute nephritis. He reports four cases (two in adults and two in children) of acute nephritis following tonsillitis, where other cause for the renal trouble could be excluded, and where long-standing disease of the kidneys could also be excluded. There was no evidence of scarlet fever in any of the cases. He believes that acute nephritis is more often due to tonsillitis than is commonly supposed. In many cases of acute nephritis considered primary, the infection enters through the tonsils, but the local manifestations are very mild, and are thus overlooked.

He emphasizes the importance of careful examination of the heart and urine in tonsillitis, such examinations to be kept up for a time during convalescence.

ORTHOPEDICS.

IN CHARGE OF

NATHANIEL ALLISON, M. D.

The Ultimate Results of the Bloodless Replacements of Congenitally Dislocated Hips.—JOHN RIDLON, M. D., Chicago (*The Journal of the American Medical Association*, April 16 and 23, 1904).—The motive of these two papers is to give a straightforward presentation of the facts, and to correct certain delusions and false impressions that have crept into the minds of medical men. The newspapers raised this method of treatment far above its deserts, and now are disposed to cast it down far below its deserts; this serious mistake the writer wishes to obviate.

Dr. Ridlon gives a complete report of all the hips he ever treated. Dividing them into four periods, he characterizes them as "The period of indifference; the period of interest; the period of delirium, and 'the morning after,' when things look so differently."

One hundred and forty cases are reported, twenty-six of which Lorenz operated upon. The results altogether fall below what is claimed by Lorenz, and for this difference Dr. Ridlon cannot account. He believes the method of Lorenz to be the best operation, and the only one to be considered in bilateral cases. He places the perfectly stable, anatomical replacements at 10 per cent.; transpositions, 60 per cent.; failures, 30 per cent. The age for operation and the dangers of operation are thoroughly considered.

In the discussion which followed the reading of these papers before the New York Academy of Medicine, Section on Orthopedics, Drs. Gibney, Bradford, Wilson, Whitman, Jacobi and Shaffer agreed with the writer in the principal points of his paper.

A Case of Spastic Paralysis Treated by Transplantation of Hamstring Tendons; Also a Case of Contracture of Hamstring Muscles, of Spastic Origin, Relieved by Elongation of Hamstring Tendons.—BERNARD BARTOW, M. D., Buffalo, N. Y. (*The Amer. Journal of Orthopedic Surgery*, February, 1904).—*Case 1.*—A boy of eleven years, with a history of forceps delivery at birth, presented at the age of four marked spastic contractures general in distribution; he improved after his seventh year so that he could maintain a sitting posture and could drag himself about on the floor. His mental condition was undeveloped. At the time of operation the spastic condition was limited to the hamstring group, the legs being flexed, and standing without a support impossible. The operation consisted in dividing the semitendinosus, semimembranosus and gracilis from their insertions, uniting them in a cord, and planting them in the aponeurosis above the patella. The biceps was treated in like manner. After six months' time the patient was able to stand with the aid of a cane only, and his mental condition showed marked improvement.

Case 2.—A boy of fifteen years presented a bent knee posture of twenty degrees, due to shortening of the hamstring group, the remains

of spasticity that had been general, but had gradually improved. He had awkwardness of gait and fatigue from moderate efforts at walking and standing, and spasticity was excited in other muscles by efforts at locomotion. The hamstring tendons were elongated in their sheaths by open operation; the iliotibial band was freely divided. Improvement in gait and posture quickly followed this operation.

The cuts accompanying this paper show the marked improvement claimed by the writer.

Infectious Arthritis.—JOEL E. GOLDTHWAIT, Boston (*Boston Medical and Surgical Journal*, April 7, 1904).—"The term infectious arthritis is used to designate a joint-disease resulting from the presence within the body of some infectious organism, the symptoms being due either to the presence of the organism itself within the joint, or to some toxine produced by that organism in some other part of the body." The writer in this paper throws much light on many cases of so-called rheumatism. Where the typhoid bacillus, the pneumococcus, the streptococcus, the staphylococcus, the influenza bacillus, the dysenteric bacillus, and last, but not least, the gonococcus may produce definite joint-symptoms and joint-changes, it seems necessary that the true cause of the trouble should be sought and recognized, rather than call the whole by one name and treat the various conditions as one thing. Photographs and diagrams showing the joint-changes are inserted, and eighteen cases are given in detail. The subject is treated in a thorough manner.

The Wiring of Bone for Recent and Ununited Fracture, with Report of Cases.—STEWART LEROY MCCURDY, M. D., Pittsburg (*New York Medical Journal* and *Philadelphia Medical Journal*, April 9, 1904).—The chief value of this article is set forth in the conclusions, which are:

1. Wire the bone while the ends remain down in their normal position, thus preserving the nutrition, preventing necrosis and guaranteeing union.
2. Use iron wire instead of silver wire.
3. Anchor the bones to external bridge work to hold them in position during repair.
4. An instrument is presented to cut the ends of the bones in the depth of the wound.

The illustrations accompanying this article are instructive; so much so, in fact, that the text seems supplementary.

A Study of the Anatomy, Pathology and Etiology of Scoliosis; Also Presenting the Scoliotone, an Apparatus for Elongating and Lessening the Rotation of the Spine in Lateral Curvature.—COMPTON RIELY, M. D., Baltimore (*Journal of Am. Med. Ass.*, April 2, 1904).—The literature on the subject is reviewed briefly to show that little or no attention has been paid heretofore to a distortion of the pelvis, which the writer shows by measurements to be present. This important point is held by Dr. Riely to be of prime significance in the etiology of all cases except those due to paralysis, empyema, etc. This view is a very interesting one, as it explains in part the belief that scoliosis is due to faulty atti-

tude. Inequality of length in the legs should also be corrected, as this also is evidently of etiological importance.

The scoliotone is a pressure apparatus on the Beely order, differing, however, in that the thorax and pelvis are fixed, while in Beely's machine the patient rests on feet and elbows.

The Treatment Following the Bloodless Reduction of Congenital Hip Dislocation.—DEXTER D. ASHLEY, M. D., New York, and FREDERICH MUELLER, M. D., Chicago (*New York and Philadelphia Medical Journal*, April 23, 1904).—This paper, which makes its appearance one year and a half after the tour of Dr. Lorenz through this country, is of little value to those who were intrusted with the care of the patients operated upon by him. It is intended to be the post-operative instructions that Dr. Lorenz himself would give to those looking after his work. As such it is of value in a reflective way. The thought naturally arises, why did not the gentlemen, writers of this paper, write it a year ago, when its suggestions would have been of the greatest value.

The paper, which is to be followed by another later, deals entirely with the case after the operation is done and the cast is applied. It is full of valuable suggestions, both as to exercises and the comfort of the patient. These suggestions are of greatest interest where an anatomical reposition has not been accomplished, but where the femoral head is anterior.

When the cast is removed the possible positions and the thing to do for each is schematically divided into two classes, viz.: Group A, normal positions of the head; Group B, abnormal positions of the head. "It is easily apparent that these different conditions must be met by a varied aftertreatment. Even secondary operations with anæsthesia may become necessary."

NEUROLOGY.

IN CHARGE OF

SIDNEY I. SCHWAB, M. D.

On the Value of the Examination of the Cerebro-Spinal Fluid in the Diagnosis of Nervous and Mental Disease.—SIEMERLIG (*Berl. Klin. Woch.*, No. 21, 1904).—The rapid appearance of papers of this sort in the German journals shows the interest which this new diagnostic procedure is arousing. Meyer's study of thirty-five cases showed that the method had a very great value. This paper is a continuation of this work, with the addition of the examination of the physical and chemical characteristics. The author draws attention to the importance of the color of the fluid, and to the importance of the chemical examination for albumen, and especially to the peculiar reaction first described by Guillain and Parant. The material upon which this paper is based consisted of thirty-eight cases of dementia paralytica and fifteen cases of various nervous diseases. The following conclusions are noted: The cytodiagnosis as well as the chemical and physical characteristics of the cerebro-spinal

fluid enriches the diagnostic methods very considerably. A marked lympho-cytosis points to a meningeal irritative process. A meningitic process with cellular exudates is probably present. The lympho-cytosis is usually combined with an increase in the amount of albumen after the addition of sulphate of magnesia. The study of the color can, in certain instances of hemorrhage, give information in regard to the origin of the process.

Juvenile Tabes.—(GORDON (*New York Med. Journal*, May 7, 1904).—This is a contribution to the subject of juvenile tabes, and adds to the growing literature on this variety of tabes. The case is that of a girl seventeen years old, with subjective sensory disturbances, girdle sensations, disturbances in the deep reflexes and of the sphincter of the bladder, who presents at the same time an old, complete brachial monoplegia, probably of poliomyelitic origin. The case illustrates the following points: (1) A rare example of tabetic manifestations developed in a patient who shows symptoms of an acute anterior poliomyelitis of infancy. (2) It puts on record a new case of juvenile tabes. (3) It also shows that hereditary syphilitic tabes and acquired tabes are identical in their symptomatology.

The Cyto Diagnosis of Tabes and Dementia Paralytica—FRENKEL (*Monatschrift fuer Psychiatrie und Neurologie*, May, 1904).—Attention is called in this paper to the value of the examination of the spinal fluid in cases of early tabes and dementia paralytica where the clinical symptoms are not clear enough to make a definite diagnosis. The author describes in detail the technique of the examination as originated by Widal. To illustrate the value of this procedure a number of cases are described. For example, a case of tabes in which the diagnosis was in doubt until the examination of the spinal fluid showed the presence of the typical findings—that is, an increase of lymphocytes.

The Diagnostic Value of the Plantar Reflex.—STANLEY BARNES (*Review of Neurology and Psychiatry*, May, 1904).—This is one of the most valuable contributions to this subject that has as yet appeared. It not only is based upon a vast material, 2,500 cases, but its conclusions are strengthened in those cases where there was some doubt by the post-mortem examination in one hundred and fifty, in which the disease proved fatal. In this way some of the most remarkable data in respect, especially to the unilateral presence of the reflex is explained. No one can be in a position to speak with any exactness in respect to this phenomenon without a careful reading of this paper. The conclusions of this remarkable study are as follows: (1) In adults, an extensor response (Babinski's) sign never occurs in health; it is always indicative of organic disease. The pyramidal system need not be so injured as to show post-mortem lesions. An extensor response may be produced in any condition which greatly raises intracranial pressure, even if this condition does not cause a demonstrable lesion of the pyramidal system. For instance, an extensor response may occur in hydrocephalus, meningitis, cerebral tumor, etc., in such instances the extensor response usually occurs in comatose or semicomatose states. An extensor response also

occurs in convulsive conditions of organic conditions in epilepsy, uremia, infantile convulsions, strychnine poisoning, etc. (2) A reflex response is the normal plantar reflex of the adult in pyramidal disease in acute conditions if only a small amount of the pyramidal influx is removed by an organic cause; in chronic cases even when a large amount of the pyramidal influx is removed. (3) Under certain conditions, it is sometimes possible to obtain in the extended position of the patient an extensor response and in another a flexor response from the same foot. This may be termed the position of pyramidal equilibrium. (4) The position of pyramidal equilibrium is lower in the scale of pyramidal disease in recent and acute cases where the disease is of long standing or of very chronic origin. (5) There is a constant tendency in the adult for an extensor response to give way to a flexor response; the more chronic the case and the less severe the pyramidal lesion, the more rapidly will a flexor response be re-established, even though the limb remains severely paralyzed and contracted. (6) The infantile response of children under the age of two years is dependent upon the immaturity of the pyramidal tracts; it resembles the response of pyramidal equilibrium rather than that of full spasticity. The extensor response comes on simultaneously with the incidence of pyramidal disease. The reflex is not abolished by total transverse section of the cord and appears to be less affected than any other reflex by nerve shock. (7) The plantar reflex may be absent in health when the foot is cold or damp; it is also frequently absent in hysteria, multiple neuritis, infantile paralysis, affecting the leg and in severe tabes.

GENITO-URINARY SURGERY.

IN CHARGE OF

H. McC. JOHNSON, M. D.

Spontaneous Hemorrhages of the Prostate.—MOTZ and SUAREZ (*Am. des Mal. des Orig. Urin.*, April 1, 1904).—From an examination macroscopically of sixty prostates at autopsy, ninety from the Musée Guyon, and microscopically one hundred prostates, the authors find that the hematuria consecutive to a spontaneous prostatic hemorrhage is observed in the case of destruction of the vesical or urethral walls by propagation of a neoplasm or severe tuberculosis of the prostate; that the hematuria observed in prostates are due, above all, to the lesions of the chronic cystitis, which are very frequent in these cases; to blood from the kidneys, pelvis, ureters and posterior urethra; that up to the present but a single case where the intraprostatic hemorrhage has opened into the bladder has been observed. This was caused by the production of an intraprostatic angioma.

Suprapubic Prostatectomy Under Nitrous Oxid Anæsthesia.—WIENER (*Jour. A. M. A.*, May 14, 1904).—The chief contraindication to the performance of a prostatectomy up to the present time, according to the con-

sensus of opinion, has been the danger resulting from the administration of ether or chloroform; and, as the removal of the prostate gland is the ideal surgical procedure in the treatment of prostatic hypertrophy, the author expresses the hope of widening the field of usefulness of this operation and of extending its splendid benefits to patients who have heretofore been considered subjects fit only for palliative operations. By the use of laughing gas and rapid work there seems to be practically no contraindications to suprapubic prostatectomy. The less instrumentation to the urethra and bladder before the operation the better for the patient and surgeon. So that previous to operation the author allows the patient's urine to accumulate in his bladder for about twelve hours in order to distend it. Under laughing gas anæsthesia the bladder is opened suprapubically, the interior bladder wall incised with scissors, the finger introduced through this opening and the prostate rapidly enucleated *in toto*. A strip of plain sterile gauze is packed firmly against the raw surface left by the removal of the prostate. It is essential to begin with continuous bladder drainage immediately after operation.

All of the contraindications usually mentioned are not for the operation, but for the administration of ether or chloroform. The value of laughing gas and of rapid work in these prostatic cases cannot be overestimated. These two factors are, then, the keystone to success in suprapubic prostatectomy.

So we are now enabled to offer these poor old men an almost certain promise of a complete cure by an operation that can be done without ether or chloroform, that rarely takes more than twelve minutes to perform and has a mortality of but 4 per cent.

Entrance and Removal of an Unusual Foreign Body from the Bladder.—WEAVER (*Amer. Med.*, April 30, 1904).—In this case the patient's husband inserted a sponge tent into the urethra, supposing it to be the uterine opening, for the purpose of producing abortion. Fourteen hours later it produced tenesmus and bleeding, and was removed by the writer through the dilated urethra sixteen hours after its introduction.

Experimental Nephritis Followed by Decapsulation of the Kidney.—HALL and HERXHEIMER (*British Med. Jour.*, April 9, 1904).—In these experimental cases no marked formation of new blood channels between the kidney and the adherent tissues surrounding it were found subsequent to decapsulation. The authors experimentally produced acute nephritis by injecting rabbits with 0.5 to 0.75 c.cm. of a 2.5 per cent. solution of neutral ammonium chromate, and noted the effect of decapsulation in these cases. They found that decapsulation means the removal of a portion or the whole capsule with more or less laceration of the cortical tubules, of hemorrhage and the exposure of a raw, absorptive surface. Eight to fourteen days after the operation the kidney is surrounded by a thick, strong connective tissue capsule.

They suggest that the reported improvements following decapsulation may be due to action upon the sympathetic ganglia, and that this operation should be considered in the same light as those operations which, undertaken to remove a renal calculus, lessen the pain and improve the general condition of the patient, although no calculus is found. The

question then arises as to whether complete denudation is indicated or whether punctures would not suffice. In fact, Israel, Nicolayson and others have abandoned the method in chronic conditions. It seems clear that simple reni-puncture relieves tension and promotes renal functions.

Essential Nocturnal Incontinence of Urine.—REVEL (*Ann. des Mal. des Org. Urin.*, April 1, 1904).—The most important element in nocturnal incontinence may be placed at the door of the nervous system. Courtade and Guyon have shown that the sacral nerves act upon the muscular layer of longitudinal fibres, while the lumbar nerves act upon the circular fibres; then the circular layer is that of vesical occlusion. The author eliminates the epidural method, and says air injection should be abandoned. He favors the injection of an artificial serum between the rectum and sacrum. Three cases of cure in adults are reported in which the incontinence lasted from infancy.

Investigations of the Newer Methods for Diagnosing Unilateral Kidney Lesions.—KROTOSZYNER and WILLARD (*Amer. Jour. Med. Sciences*, May, 1904).—The authors have this to say upon the results of their investigations: None of the methods for determining the functional capacity of the kidneys enable us to arrive at a conclusion upon the actual functions of both kidneys or either organ. In other words, none of these methods alone are sufficiently accurate to decide upon the basis of one of them the question whether a kidney should be removed or not. The real value of the methods worked out in our material lies in the comparative results and in the coincidence of the methods. A "*conditio sine qua non*" for application of these methods is ureteral catheterization, and where feasible catheterization of both ureters. If both urines obtained in this way are subjected to cryoscopy, phloridzin test, urea examinations and microscopic examinations, we are certainly enabled to get a fair idea of the functional value of either kidney, and to arrive at safe conclusions from our findings as to intended operative procedures.

Surgery of Urinary Tuberculosis in Women.—HUNNER (*American Medicine*, April 30, 1904).—Some idea of the present status of the surgical technique as evolved in work on thirty-five cases is given, together with the results of the surgery with reference to wound healing, cure of the local disease and effect on the general health of the patient. After a general consideration of the cases in the light of the above, the author says: Tuberculosis of the urinary system is a surgical disease, being, as a rule, unilateral, and often the only focus of tuberculosis in the body.

If the disease is bilateral, and there are no pronounced symptoms referable to the kidneys, the treatment should be that usually accorded tuberculosis of the lungs, viz., suitable climate, nutritious diet and proper regulation of the patient's rest and exercise; but if one or both sides begin to cause marked local or general manifestations, surgical intervention is of much benefit.

In case of bilateral disease, or in associated disease of the lung, the anæsthetic is of great importance. Local cocaine anæsthesia may be used for nephrotomy, and nitrous oxide gas for nephrotomy, nephrectomy or nephro-ureterectomy.

Thickened ureters are generally tuberculous, and should be removed with the kidney if the patient's condition justifies.

Bladder disease in these cases is often non-tuberculous, and removal of the diseased area should not be attempted at the first operation. If the bladder fails to heal within a year, under ordinary methods of systemic treatment, the disease is probably tuberculous, and if not occupying more than half of the bladder it should be excised.

LARYNGOLOGY AND OTOTOLOGY.

IN CHARGE OF

WILLIAM E. SAUER, M. D.

The Clinical Application of the Direct Methods of Examining the Air Passages and the Esophagus.—v. EICKEN (*Archiv fuer Laryngologie und Rhinologie*, Band 15, Heft 3).—In a very lengthy article on direct laryngoscopy, tracheoscopy and esophagoscopy the author not only describes in detail the technique of the various methods, but cites many instances where positive diagnoses were made possible only by these methods. Among the advantages claimed for direct laryngoscopy are that the larynx and trachea of an infant can be inspected after all other methods fail, and a good view of the posterior wall of the larynx and the entire inner surface of the trachea can be obtained. The most frequent application of this method the author found to be in determining just how much and at what point or points of the trachea were most encroached upon by cervical or intra-thoracic tumors, especially enlargement of the thyroid gland. A knowledge of the exact point of pressure being of great value to the surgeon in the differential diagnosis between an aneurism of the ascending portion of the aorta and other intra-thoracic tumors, the direct method of examining the trachea often furnishes valuable aid. Intra-tracheal tumors are not only positively diagnosed but are radically removed, as well as foreign bodies in the trachea and the larger bronchi. The writer states further that in a number of cases he was able to positively diagnose carcinoma of the esophagus by means of direct inspection of the esophagus with the esophagoscope and could determine the exact location of foreign bodies which would not have been possible through other means.

The Efficacy of Local Treatment as a Factor in the Cure of Laryngeal Tuberculosis.—SKILLERN (*American Medicine*, May 7, 1904).—After reviewing the established treatments of laryngeal tuberculosis, the author concludes:

1. Local treatment is always beneficial, even if it only relieves the most distressing symptom, *i. e.*, pain.
2. It depends entirely upon the general condition of the patient what form of local treatment is most advisable.
3. While laryngeal tuberculosis in some cases may be cured, there always remains more or less chronic laryngeal catarrh.

4. That extensive surgical procedures in cases in which the lungs are deeply involved, except as palliative treatment, are unjustifiable.

5. That extensive curetting should only be employed in those cases in which there is a fair chance of curing the disease and when it is necessary to prolong life a short time.

6. The prognosis depends more on the general systemic condition of the patient than upon the throat lesion. It naturally follows that the more severe the throat lesion the greater the degree of constitutional weakness.

7. If a case is seen at an early stage of its development, the prognosis is good provided, of course, the concomitant lung disease is responding to treatment.

8. When there is much ulceration and loss of tissue, absolute cure is impossible, but such an amelioration of symptoms may be brought about as to render the patient fairly comfortable for the rest of his existence.

9. The best results are obtained when the tuberculous deposit in the larynx is localized.

When and When Not to Operate on the Mastoid Bone.—GRADLE (*Illinois Medical Journal*, May, 1904).—The indications for mastoid operations are not easily drawn and errors on both sides are not uncommon. According to Gradle, the operative indications can be inferred from the following data:

1. The least suspicion of intracranial extension, based on persistent one-sided headache or on any cerebral symptoms, gives an immediate vital indication.

2. Whenever a perforation threatens this should be anticipated by operation, and if it has opened spontaneous through a narrow fistula the danger of pus under tension should be obviated by better drainage. Perforation is inevitable when the posterior wall of the meatus of the ear begins to sag, whenever the soft tissues behind the ear show inflammatory infiltration (not merely a pale edema) or when infiltration begins around and beneath the tip of the mastoid.

3. When the characteristic signs of mastoiditis, viz., pain and tenderness, continue to increase after the third day, or even increase rapidly after the second day, immediate operation is the safest course.

4. When the discharge of acute otitis with mastoid symptoms does not diminish in the course of about two weeks of appropriate treatment, chronicity must be expected, even though the mastoid signs diminish. Hence an operation is now proper.

5. If the mastoid pain and tenderness begin to diminish after two or three days of climax, the operation may be preferred. Those cases in which the mastoid symptoms remain stationary after the first two or three days belong to the debatable class in which it is difficult to say whether to operate or to wait. If mastoiditis follows, the discharge of which has ceased the need of operation is greater than when there is still discharge from the middle ear. Streptococcus infection means greater danger and more need of operation than the presence of the pneumococcus or staphylococcus in the pus of the middle ear. As a rule, however, we must individualize in these cases and rest prepared for operation until recovery has begun. In cases of doubt, an un-

necessary operation may be safer than an unreasonable delay. In all acute cases the operation to be considered is the opening of the mastoid. The radical operation is entirely uncalled for and improper.

Further Experience with Intratracheal Medication. — DONNELLAN (*American Medicine*, May 14, 1904) reports his recent results from intratracheal medication in tuberculosis, asthma and bronchitis. The technic the author employs is as follows: The larynx is anesthetized with a four per cent. solution of cocaine; the syringe is then charged with the selected medication heated to about 102 F., two drams being the amount used. This is injected directly into the trachea during deep inspiration. The vehicles for the drugs employed are the fluid petroleum oils or pure olive oil, or distilled glycerine. To these may be added creosote, menthol, guaiacol, camphor or chloretone, in one to four per cent. solutions, singly or combined; or when there is a great deal of cough present, $\frac{1}{8}$ gr. of codeine or morphine may be added. When fetid bronchitis was present, $\frac{1}{2}$ gr. of iodoform or potassium permanganate was found to be useful. Six cases in point are reported in detail.

On the Technic of Laryngectomy Under Local Anesthesia. — WREDEN (*Roussky Vrach*, rev. *New York Medical Journal* and *Philadelphia Medical Journal*, May 14, 1904) reports a case of cancer of the larynx in which he removed this organ under local anesthesia. The substitution of local for general anesthesia in this operation is very desirable, because of the frequency of postoperative pneumonia which follows laryngectomy in spite of the latest forms of canula with tampons which are employed during this procedure when chloroform is given. In the case reported the patient received one gramme of a one per cent. solution of morphine and 0.0012 gramme of scopolamine fifteen minutes before the operation. The first step was tacheotomy under cocaine. Then the larynx was removed according to Billroth's method from below upward, a one per cent. solution of cocaine being injected into the lines of insertion of the muscles to be divided and into the mucous membrane of the larynx along the incision. Altogether twelve hypodermic syringefuls of this solution were used. The operation was entirely painless.

OPHTHALMOLOGY.

IN CHARGE OF

JOHN GREEN, JR., M. D.

Dendritic Keratitis. — J. W. CHARLES (*The Am. Jour. Ophthalm.*, May, 1904) divides dendritic keratitis into (1) vesicula (herpetic) and (2) papular. The latter form has been definitely connected by certain authors with malaria although cases independent of this disease have been observed.

The inference that the disease is due to a terminal nerve lesion would seem to be justified from the following considerations: Dendritic

keratitis is observed in those diseases which are prone to attack the central or peripheral nervous system. The herpetic form is vesicular and is the expression of a descending neuritis from a lesion in the Gasserian ganglion. The papular form occurs in malaria, grip and other diseases which show a tendency to involve the peripheral nervous system. The irregular ramifications of the papular lesion resemble so strongly the herpetic form as to suggest a nerve lesion probably purely peripheral. The extreme persistence of those cases which do not recover immediately points in the same direction.

The lesion is either (1) a degeneration of nerve terminals caused by a toxin, which also causes inflammation, or (2) it is an active neuritis with injury to surrounding parts by the loss of nerve supply and the blocking of lymph channels. Evidences of the latter are (1) anesthesia. Excluding the other two causes of this symptom (hysteria and pressure edema) it can only be explained by admitting a "neuroparalysis." (2) The shape of the lesion in all reported cases greatly resembles the branching of nerve fibrils. (3) The lesion is at first directly beneath the epithelium, which is innervated by fibrils farthest removed from the nutritional source (the corneal lymph channels), but later involves Bowman's membrane and the substantia profria in which lie the larger bundles of fibrils.

The Epidemic of So-Called Trachoma.—E. M. ALGER (*N. Y. and Phila. Med. Jour.*, April 9, 1904).—This writer contends that the recent agitation relative to the supposed extraordinary prevalence of trachoma in the public schools of certain American cities is unwarranted by the facts. He is decidedly of the opinion that the wholesale diagnoses of trachoma among school children were unjustified, as the course and behavior of the conjunctival disease encountered were far more suggestive of follicular conjunctivitis. This view receives additional weight from the fact that very many of the children afflicted with "so-called trachoma" were distinctly strumous, many of them with large adenoid growths in the nose.

The Management of Glaucoma of the Intermittent Type.—ABADIE (*Ann. d'Oculist*, April, 1904).—Abadie recognizes a type of glaucoma of insidious onset, which advances at intervals by "crises" of various kinds. Between the exacerbations the symptoms entirely subside, thus giving a false sense of security to the patient and misleading the practitioner. Although at first apparently benign, these cases end in blindness unless recognized early and properly treated.

The "critical" symptom may be: (1) A neuralgia-like pain in the eye and side of the head, which appears suddenly, lasts for one or two hours, and then as suddenly disappears. If it appears without regularity and is recalcitrant to quinine, its glaucomatous nature may be suspected. These attacks become increasingly frequent until, in the end, a true glaucoma supervenes with dilated pupil, permanently increased tension, and other typical symptoms. (2) In other cases the symptom of the prodromal period is the "rainbow-hued" ring around lights. (3) Irregularly-occurring temporary obscurations of vision may be the single

sign premonitory of the approaching true glaucoma. Two or more signs may be combined as "mixed" forms. These "critical" symptoms may precede by two to four years the appearance of any other signs. They can be controlled by pilocarpin for a time, but improvement obtained by this means is not permanent, and the symptoms reappear on withdrawal of the medicine. Abadie thinks that this type is rather common and is largely unrecognized. Iridectomy is the only efficacious therapeutic method.

Right Pulsating Exophthalmus, Ligation of Both the Right Common Carotid Artery and the Left Internal Carotid Artery, Accidental Traumatism, Cure.—C. A. OLIVER (*N. Y. Med. and Phila. Med. Jour.*, April 9, 1904).—Right exophthalmus developed shortly after the patient was shot, the bullet entering back of the right ear. Examination showed the right eye proptosed and turned out. Adversion limited, A thrill (ceasing on pressure of the carotid artery) could be felt when the eye was forced back into the orbit. A pulsatory thrill was detected at the point of entrance of the bullet at the mastoid. The patient complained of a thumping noise beneath the right ear.

Temporary improvement followed ligation of the right common carotid, but four months later the double bruit was found increased as well as the tortuosity of the retinal veins and arteries. The external ocular vessels were dilated.

Three months later all symptoms having increased, the left internal carotid was ligated. Apart from a transient disappearance of the bruit and temporary obscuration of vision on the tenth day there was no result from this operation.

Twenty-one months after the last operation the patient collided with a playmate. The same evening he noticed a diminution of the bruit and exophthalmus. The following morning the bruit had entirely disappeared and never reappeared. Examination three months later showed total absence of pulsation, thrill and exophthalmus.

SOCIETY PROCEEDINGS.

ST. LOUIS SURGICAL CLUB.

Meeting of May 11, 1904.

SUPPURATIVE OSTEOMYELITIS.

Dr. William S. Deutsch read a paper with the above title, for which see page 357.

Dr. Ernst Jonas said that he received the impression from Dr. Deutsch's paper that Dr. Deutsch considers injury, or trauma, as absolutely essential to osteomyelitis. As student, Dr. Jonas saw Dr. Lesoer's experiments with staphylococcus pyogenes aureus on rabbits, and, although Lesoer showed that injury to the bones will make them more susceptible to osteomyelitis, he proved that by injecting a very virulent culture of staphylococcus pyogenes into the veins he could produce acute osteomyelitis—there having been no previous injury to the bone. The importance of Lesoer's experiments, therefore, lies in the fact that any disease, slight or grave, which brings virulent staphylococci into the blood might produce acute osteomyelitis.

He agreed with Dr. Deutsch that a very early and thorough operation is to be advised.

Dr. M. B. Clopton preferred the term "infectious" osteomyelitis. He did not think "suppurative" a good term, for the cases all suppurate sooner or later unless they are operated upon, with the exception of tuberculous ones, which do not necessarily suppurate. Dr. Deutsch had taken x-ray pictures which had helped in the diagnosis. In certain instances they will aid diagnosis in acute cases. He gave as an illustration the case of a small boy who was sick a day or two and then suddenly developed intense pain in the wrist. The third day hyperemia was so marked that it was easily shown in the x-ray photograph. Infection was shown by a very small amount of pus when the radius was opened.

He thought Dr. Dixon would remember the case of a man they had seen at the polyclinic a few years ago. He went there with a tender upper end of the tibia, with a high temperature and suffering more or less at a localized point. The joint was not involved. Without waiting for the classical signs to develop, they went in and found very close to the epiphyseal line a point about the size of a hazel nut, which was the beginning of an infectious osteomyelitis. The man's recovery was interfered with in part by an acute hydrops of the knee, which was not infectious and was not accompanied by fever. The condition when occurring about the knee was comparatively easy to diagnose, but it was difficult when it occurred near the greater tuberosity or near the hip. There it is not always clear how to differentiate it from tubercular hip disease, it being sometimes almost impossible. One thing pointed out by Lovett as constantly characteristic of hip disease was a thickening of the trochanter. In an infection this also occurs. The point is to differentiate between the two, for the treatment is entirely different in each case. In tubercular myelitis operation is never advised and never does any good; in infectious osteomyelitis it is always advised, for that is the only thing that will do any good.

The extent of operative interference is practically unlimited. The whole of the front of a long bone may be removed. He had seen the whole front of the femur, from the head running down to the epiphysis at the knee, removed. The process had gone on for about a week, and it seemed almost impossible to expect anything from the case, but the boy got so well that the flexure was as good as on the other side. The only

thing to do in such cases is to make an immediate and radical cleaning out, and Dr. Clopton did not believe they could go too far.

Dr. John C. Morfit thought we could recognize two main factors in infections—the physiological resistance to invasion and the invading organism. The severity of the infection is an index of the former, rather than of the virulence of the latter. We cannot conceive of a theoretically aseptic wound. Wounds are practically aseptic when the resistance is sufficient to subdue the ever present organisms or their products.

Proliferative osteitis, without pus formation, as illustrated in luetic osseous hyperplasia, is an evidence of impaired vitality, permitting a degree of stimulation just short of inflammation. Such bones seem ever on the verge of suppurative inflammation. Barring constitutional causes, which weaken the normal defences, we have the acute and chronic suppurative varieties in which a history of trauma is almost invariably obtained, and for want of any other or better cause, we assume that it must be the important etiological factor which has upset the equilibrium normally sustained. The case is rarely seen in which a blow or a bruise, be it ever so slight, is not recalled by the subsequent developments. The wonder is that the inflammatory results are so infrequent when compared with the proportionately large number of traumatisms not so followed. If we are right in assuming a traumatic starting point in these conditions, their comparative infrequency is a beautiful tribute to our natural systemic defences.

The diagnosis is made difficult, most often, by lax methods in examining the case. The treatment needs no comment. It is that of all inflammations—drainage and rest.

Dr. Deutsch, in closing, said that he felt very much complimented that they had enhanced his paper by such an able discussion. In regard to Dr. Jonas' statement that trauma was not always the cause of the condition, he said this was true, but the case he had written about was one due to trauma and he had therefore attempted to confine himself to that class of cases in his remarks. He had recently noticed that Fraenkel had written at length upon osteomyelitis, not diagnosed in the life of the patient, especially in the long bones, the condition having evidently occurred as a result of infectious fevers, as numerous autopsies showed. He had referred in his paper to typhoid as one of the possible causes, but had tried to keep the paper strictly limited to traumatic osteomyelitis.

As to the permanent injury caused by myelitis, he thought Dr. Clopton's theory was entirely correct. In this case there was simply left a shell of bone and the little girl now ran around and played and showed only a scar on the front of the leg to indicate the amount of damage. He believed this good result was obtained because the incision was an unusually long one.

BOOK REVIEWS.

MIKROSKOPIE UND CHEMIE AM KRANKENBETT. Fuer Aerzte und Studierende. Bearbeitet von DR. HERMANN LENHARTZ, Professor der Medizin und Direktor des Eppendorfer Krankenhauses in Hamburg. Mit zahlreichen in den Text gedruckten Abbildungen und drei Tafeln in Farbendruck. Vierte, wesentlich umgearbeitete Auflage. Berlin: Verlag von Julius Springer. 1904. (G. E. Stechert, New York.)

In the six main divisions of the book the author treats successfully of the vegetable and animal parasites, the examination of blood, sputum, stomach contents, stool, urine, and finally of the exudates and transudates. The utilization of bacteriologic methods for diagnostic purposes is treated fully and very clearly, especially the bacteriologic examination of the blood. The thin and yet opaque paper enables the volume of 377 pages to be condensed into so small a bulk that it can almost be slipped into the pocket. At the back of the book is a series of colored plates of unusual beauty and fidelity. In particular the plates illustrating stained blood specimens from various diseases are superior to anything we have seen in a book of this sort. An adequate index doubles its value.

LEITFADEN DER THERAPIE DER INNEREN KRANKHEITEN MIT BESONDERER BERUECKSICHTIGUNG DER THERAPEUTISCHEN BEGRUENDUNG UND TECHNIK. Ein Handbuch fuer Praktische Aerzte und Studierende. Von DR. J. LIPOWSKI. Zweite, verbesserte und vermehrte Auflage. Berlin: Verlag von Julius Springer. 1904. (G. E. Stechert, New York.)

This little volume of some 236 pages presents a brief guide to the modern therapeutics of internal diseases. It is by no means a mere compend, but is full of originality, and is based upon the writer's own great experience as well as upon what is best in recent literature. While primarily devoted to therapeutics, it contains many valuable diagnostic and pathologic nuggets. The arrangement is systematic, not alphabetical, and, being a masterpiece of condensation, it is astonishing how much material the writer has managed to put between the two covers. Many a bulky text-book contains no more meat. We can unreservedly commend it to readers of German as a volume for ready reference. It is in every way quite up to date.

ROENTGEN RAY DIAGNOSIS AND THERAPY. By CARL BECK, M. D. With 322 illustrations in the text. D. Appleton & Company, New York and London. 1904.

This book is similar to the work of Williams, and compares very favorably with it in general. The x-ray prints are an improvement on those in Dr. Williams' book; they are, in fact, superior to any that have yet been published in book form. The chapters on the treatment of deformed fracture and on the medico-legal aspect of the x-ray, are right up to the latest ideas. The various skin affections where the Roentgen ray is of value as a therapeutic agent are classified, and some interesting "before and after" pictures shown. The book has a distinct value.

MANUAL OF MATERIA MEDICA AND PHARMACY. Specially designed for the Use of Practitioners and Medical, Pharmaceutical, Dental, and

Veterinary Students. By E. STANTON MUIR, Ph. G., V. M. D. Instructor in Comparative Materia Medica and Pharmacy in the University of Pennsylvania. Third edition, revised and enlarged. Crown octavo, 192 pages, interleaved throughout. Bound in extra cloth, \$2.00 net. F. A. Davis Company, Publishers, Philadelphia, Pa.

This work, originally published eight years ago, and a second edition four or five years later, is intended to give to practitioners and students of medicine, in as concise and clear a manner as possible, the essential points in materia medica and pharmacy without the detail which necessarily results in a bulky volume. The first part consists of a synopsis of the terms most frequently used in materia medica; in the second, the chief drugs, arranged in alphabetical order, are briefly discussed; while the third is devoted to a concise presentation of pharmaceutical processes. The book will find its chief value in the hands of medical students, and, being interleaved, lends itself to use as a lecture note-book.

THE MEDICAL NEWS POCKET FORMULARY. By E. QUIN. THORNTON, M. D., Assistant Professor of Materia Medica in the Jefferson Medical College, Philadelphia. New (sixth) edition. Lea Brothers & Co., Philadelphia and New York.

Besides a useful list of weights and measures, incompatibles and dose-table, the little book contains a great number of prescriptions and helpful hints under the headings of the various diseases, arranged alphabetically. It has the valuable features as well as the limitations inherent in such a compilation.

ORGANIC AND PHYSIOLOGIC CHEMISTRY. A Manual for Students and Practitioners. By ALEXIUS MCGLENNAN, M. D. Series edited by V. C. PEDERSEN, A. M., M. D. Lea Brothers & Co., Philadelphia and New York.

This little volume contains the essential knowledge on the subject of organic and physiologic chemistry for medical students and practitioners of medicine who have not the time and inclination to read voluminous works. The first part deals with organic chemistry pure and simple, taking up in turn the various groups, and presenting concisely the facts necessary for a reasonable knowledge of their characteristics.

The second part deals with organic chemistry in its relation to the human organism. This part is of the greatest interest to the student of medicine. It contains chapters on chemical changes in living organisms, chemical composition of the animal organism, milk, digestion, respiration, elimination of waste material, food and diet, metabolism, etc., etc.

A NARRATIVE OF MEDICINE IN AMERICA. By JAMES GREGORY MUMFORD, M. D., Assistant Visiting Surgeon to the Massachusetts General Hospital, etc. Philadelphia and London: J. B. Lippincott Company. 1903.

This book does not aim to be a complete history. It is a narrative. The story of the rise and progress of American medicine and surgery is told in an attractive style. The book is one of the best of its class that it has been our privilege to read. The publishers have done their part in a creditable manner.

THE WORTH OF WORDS. By DR. RALCY HUSTED BELL, with an Introduction by DR. WILLIAM COLBY COOPER. Hinds & Noble, Publish-

ers, New York. \$1.25 postpaid. Third revised and enlarged edition.

This is a book which will prove useful to all who want to speak and write good English. The arrangement of the text matter in pithy paragraphs of alphabetical sequence, and with marginal notes, makes it very handy as a ready reference book. The Worth of Words is printed in clear type, and contains 336 pages.

WOMAN'S UNFITNESS FOR HIGHER COEDUCATION. By ELY VAN DE WARKER, M. D., Commissioner of Schools, Syracuse, N. Y. The Grafton Press, New York. 1903.

The author advocates in this little volume some strong arguments for his contention that the time for higher coeducation has passed. Although it is impossible to accept unreservedly every one of the author's arguments, it cannot be denied that, as a whole, the subject is handled by him in an interesting and clever manner, and that many of his points undoubtedly are well taken.

THE PRACTICAL CARE OF THE BABY. By THERON WENDELL KILMER, M. D. With 68 illustrations. F. A. Davis Co., Publishers, Philadelphia. 1903.

This book of 158 pages gives much valuable advice concerning the proper care of the new-born child. In its general scope it is different from similar publications insofar as it brings in greater detail the little "ins and outs" of the care of the baby. The author wrote this booklet for mothers who know absolutely nothing about the care of babies, and in this way certainly has enlarged the field of usefulness for a work of this kind. The illustrations are very good, and enhance the value of this little book.

PHYSICS AND INORGANIC CHEMISTRY. A Manual for Students and Practitioners. By ALEXIUS MCGLENNAN. The Medical Epitome Series. Lea Brothers & Company, Philadelphia.

Like the other volumes of this series, the little book exposes, in a terse and concentrated way, the principles and essentials of the subjects named in the title. The contents are unobjectionable from a scientific point of view, and cover the ground fully. In places the endeavor to be short and to condense statements in as few words as possible, has led to a form of language difficult to be interpreted by a reader not well versed in the matters discussed. As an instance, the definition of the polarization of light may be mentioned, that will leave to many a reader this phenomenon a mystery. As an introduction to the sciences dealt with the book cannot be used, but it may be of great value for purposes of reference and of refreshing the memory.

A MANUAL OF HYGIENE AND SANITATION By SENECA EGBERT. Lea Brothers & Co., Philadelphia. Third edition.

Egbert's book is well known, and the fact that the third edition appeared five years after the first, proves that it is appreciated. The traits of the book are not changed in this edition, but everywhere the attempt is noticeable to enlist the achievements of the work of the last years. Although here and there the author's personal views perhaps stand too much in the foreground, the representation is objective and impartial. The utilization of the Reports of the United States Census for 1900 for certain chapters is highly to be recommended, as some questions on certain diseases and on the dealing with them have received a new impetus by them. The book, as is known, does not intend to be a text-book, but a book for general use of the professionals as well as of the educated part of the lay public. It certainly has done much good, and will continue doing so in its new edition.

A COMPEND OF PATHOLOGY—GENERAL AND SPECIAL. A Student's Manual in One Volume. By ALFRED EDWARD THAYER. Second edition. P. Blakiston's Son & Company, Philadelphia. 1903.

Thayer's Compend forms as one volume the second edition of his two books on general and special pathology published in 1902. As this book is intended for the student as an addition to lectures and practical work, all theoretic considerations and all discussions of doubtful or disputed questions are omitted. The substance of the text, however, deals with the subject in a clear, precise way that is well adapted to the needs for which it was prepared. Although no references to literature are made, the latest publications appear to be utilized as far as necessary. It is seldom that in a book on pathology the author refrains from asserting himself; this is avoided here. The illustrations accompanying the text are good, although perhaps not numerous enough. The work will serve its purpose well enough—better than the luxurious compilations of pictures appearing in atlases and leaving for the student nothing but comparing picture with picture.

DISEASES OF THE EYE. By L. WEBSTER FOX, A. M., M. D., Professor of Ophthalmology in the Medico-Chirurgical College of Philadelphia, Pa.; Ophthalmic Surgeon to the Medico-Chirurgical Hospital. With 5 colored plates and 296 illustrations in the text; pp. 584. Cloth, price, \$4.00. New York and London: D. Appleton & Co. 1904.

Dr. Fox states in the preface that his object has been "to provide a digested summary of the known facts for use of students who, in after life, become practitioners of medicine." It would be invidious, therefore, to institute a comparison between this work, confessedly limited in scope, and an exhaustive and scientific treatise on ophthalmology. As was to have been expected, the practical aspect of the subject is the one always uppermost in the author's mind, and it is the one on which he lays particular stress. A good deal of space is devoted to the exploitation of the author's personal views, which are not infrequently somewhat at variance with accepted dicta. This persistent riding of hobbies seems hardly in accord with the author's expressed purpose to present the known facts of ophthalmology to the undergraduate student. It is to be feared that the latter will find it difficult to form a judgment as to what is essential and what is trivial in ophthalmology.

The letter-press is excellent, and is embellished by numerous illustrations, which are in the main very good. Miss Margaretta Washington has contributed a number of colored plates.

A HANDBOOK OF DISEASES OF THE EYE AND THEIR TREATMENT. By HENRY R. SWANZY, A. M., M. B., F. R. C. S. I. Eighth edition, revised. With 168 illustrations and zephyr card of Holmgren's tests. Price, \$2.50 net. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut street. 1903.

This (eighth) edition of Swanzy's well-known Hand-book has been thoroughly revised. Much fresh matter has been introduced, and a good deal that was obsolete omitted. A number of chapters have been amplified, certain topics being deemed worthy of a more detailed presentation.

In the preface to the fourth edition the author states that he has aimed to give "a succinct and practical account of his subject in its most modern aspect, without weighting his pages with excessive detail and prolonged discussion." It cannot be denied that this object has been admirably attained.

In the main the author's teaching is in accord with the accepted tenets of modern ophthalmology. We cannot agree, however, with the statement (page 48) that "it is not necessary to prescribe glasses for very slight degrees of myopia." Doubtless many cases of low myopia may be allowed to go with their refractive defect uncorrected without injury, but the implied assumption that all low-grade myopias are of the unprogressive type is not warranted by the general experience of ophthalmic surgeons.

An interesting and valuable feature is the short bibliography appended to each chapter.

JULER'S OPHTHALMOLOGY. Third edition. Revised and enlarged. A Handbook of Ophthalmic Science and Practice. For Students and Practitioners. By HENRY E. JULER, F. R. C. S., Ophthalmic Surgeon to St. Mary's Hospital; Surgeon to the Royal Westminster Ophthalmic Hospital, London. Octavo, 733 pages, with 190 illustrations and 25 full-page plates in colors and black. Cloth, \$5.25 net. Lea Brothers & Co., Publishers, Philadelphia and New York. 1904.

Dr. Juler's work has long been favorably known to ophthalmic practitioners, and this (third) edition, which has undergone thorough revision and an increase of about 200 pages in size, will surely be welcomed not only by the specialist, but by the general practitioner as well. Each chapter is preceded by a concise description of the anatomy and physiology of the structures under consideration. Especially to be commended is the orderly grouping of the topics under appropriate headings. The subject of treatment is dealt with in a broad and comprehensive manner, and at the same time with sufficient attention to detail.

The writer possesses a singularly readable style, which has distinction without rigidity. In this respect it could well serve as a model to many medical authors whose scientific performances are so frequently marred by gross inattention to literary form.

The illustrations are well executed. In the colored plates, illustrating conditions in the fundus, the red tint is rather too glaring, and does not truthfully represent the yellowish-red tint of the normal eye-ground.

TULEY'S EPITOME OF PEDIATRICS. A Manual for Students and Practitioners. By H. E. TULEY, A. B., M. D., Professor of Obstetrics in the Medical Department of Kentucky University. pp. 266. Price, \$1.00. Lea Brothers & Co., Philadelphia and New York.

If it be admitted at all that medical epitomes are valuable, there can be no question that this volume will be a welcome addition to the list of smaller works on pediatrics. The treatment of the subject-matter is necessarily condensed, but the author has managed to get a great deal of valuable information into small space, and clearness has not been sacrificed to brevity. The chapter on infant feeding is especially good and surprisingly complete. The acute infections are concisely but very clearly handled. The questions at the end of each chapter will be of value to the student in suggesting the points of special importance in the individual subjects. The book work is very good.

VERHUETUNG DER GEISTESKRANKHEITEN. By W. WEYGANDT, Wuerzburger Abhandlungen aus dem Gesamtgebiet der Practischen Medicin. A. Stuber's Verlag, Wuerzburg. 1904.

This little monograph is one of the most satisfactory that has appeared on the subject which has been so often touched in a collection such as this one. What is always desired in a work of this sort is some evidence that the writer of it really has something to tell. Instead of the usual vague statements found in monographs of this kind, there are a succession of well-planned chapters on just the points that one desires first-hand knowledge and opinion. Especially to be commended is the author's attempt to place before his readers a more practical classification of the material which this paper treats. He classifies all individuals into three groups: (a) People who, from a psychological point of view, are practically normal. Into this class are to be placed also those who might have had a slight phobia, or whose distant relatives show an occasional departure from the normal. (b) People who are the subjects of milder forms of psychoses. In this class are included hysteria, neurasthenia, chorea, alcoholics, etc. (c) The psychically diseased people and those with family diseases of various sorts.

This abstract is given to call the reader's attention to the manner of the presentation of the subject. It is a thing that one can read and feel that what he is reading is not a product of the publisher's desire to get a well-known name, nor that it is the expression of the editor's friendship for the author, but that it is a matter that the author has thought about and not vainly. It is written in a very readable and delightful German.

THE AMERICAN ILLUSTRATED MEDICAL DICTIONARY. For Practitioners and Students, A complete dictionary of the terms used in medicine, surgery, dentistry, Pharmacy, chemistry and the kindred branches, including much collateral information of an encyclopedic character, together with new and elaborate tables of arteries, muscles, nerves, veins, etc.; of bacilli, bacteria, micrococci, streptococci; eponymic tables of diseases, operations, signs and symptoms, stains, tests, methods of treatment, etc., etc. By W. A. NEWMAN DORLAND, A. M., M. D., editor of the "American Pocket Medical Dictionary." Handsome large octavo, nearly 800 pages, bound in full flexible leather. Philadelphia, New York, London: W. B. Saunders & Company. 1903. Price, \$4.50 net; with thumb index, \$5.00 net.

In this the third edition several hundreds of new terms that have been added to the vocabulary of medical sciences have been incorporated and clearly defined. The entire work, moreover, has evidently been subjected to a careful revision, and many of the tables, notably those of acids, bacteria, stains, tests, methods of treatment, etc., have been amplified, and their practical value greatly increased. It is only by such constant and careful revision that a medical dictionary can hope to reflect the progress of medical science, and the usefulness of this work by this present revision has been very largely extended.

THE AMERICAN POCKET MEDICAL DICTIONARY. Edited by W. A. NEWMAN DORLAND, M. D., Assistant Obstetrician to the Hospital of the University of Pennsylvania. Containing the pronunciation and definition of the principal words used in medicine and kindred sciences, with 566 pages and 64 extensive tables. Philadelphia, New York, London: W. B. Saunders & Company. 1903. Flexible leather, with gold edges, \$1.00 net; with thumb index, \$1.25 net.

In this little work, now in its fourth edition, we have a pocket dictionary equaled by none on the market. In this edition several thousand of the newest terms that have appeared in recent medical literature have been added, and the entire work subjected to a careful revision. We believe that the work in its new form will meet more fully than ever a real demand on the part of physicians and students.

THE SELF-CURE OF CONSUMPTION WITHOUT MEDICINE. With a chapter on the Prevention of Consumption and Other Diseases. By CHAS. H. STANLEY DAVIS. E. B. Treat & Co., New York.

This work is devoted to a consideration of the cure of consumption by other than medicinal methods. In the words of the author, its object is to show "how consumption from its beginnings to its last stages, before actual decay of the lungs takes place, can be cured in at least ninety-five per cent. of cases, and this without the use of medicine." The book is well arranged, and deals with all of those hygienic measures which have recently received so much attention in the treatment of tuberculosis.